An Address

ON THE

ANTISEPTIC MANAGEMENT OF WOUNDS.

Delivered at King's College Hospital in the London Post-Graduate Course, Jan. 18th, 1893,

BY SIR JOSEPH LISTER, BART., F.R.S.,

PROFESSOR OF CLINICAL SURGERY, KING'S COLLEGE HOSPITAL; SURGEON EXTRAORDINARY TO THE QUEEN.

THIS day five weeks the patient before you was operated on for a badly united fracture of the patella. He had been kicked on the knee by a horse twelve months previously. In spite of the care of excellent surgeons his limb was in a very useless condition. He could not raise it at all in the extended position, and, in short, he was a complete cripple. When we operated, both the upper and lower fragments were firmly adherent to the bone beneath and separated by a considerable interval. The operation was difficult and protracted, but at length we succeeded in getting the fragments together and fixing them by means of two stout silver sutures. The patient, as you see, can now walk without a stick; he can raise the limb freely in the extended position and bend it through a limited angle. A useful limb is already assured to him and he will no doubt acquire in course of time a much greater degree of movement than there is at present. I bring this case before you as an illustration of what may be done by antiseptic measures. In my opinion such an operation would be unjustifiable unless the surgeon could say to himself with a good conscience that he was practically sure of avoiding septic contamination of the wound. If you consider how terrible the disaster would probably be if septic suppuration occurred after such an operation, I think you will see that I am warranted in this view.

I propose, therefore, now to offer a few remarks as to the means we adopt and the principles on which we proceed in order to attain constancy of aseptic results in our wounds. The matter divides itself into two heads: first, during the operation to avoid the introduction into the wound of material capable of inducing septic changes in it; and, secondly, to dress the wound in such a manner as to prevent the subsequent entrance of septic mischief.

As regards the former of these heads, advancing knowledge has enabled us greatly to simplify our procedure. When I first entered upon this subject—knowing, as we did, that wounds, with rare exceptions, underwent putrid suppuration—it was natural to suppose that they were very favourable soils for the development of septic organisms. We knew from the experiments of Pasteur that the air of every inhabited place teemed with microbes of various kinds. We had not then learned to discriminate amongst the various micro-organisms, and there was no reason then to doubt that any one of them getting into a wound would produce serious mischief. Happily, however, we now know the case to be really extremely different, and this from two circumstances. In the first place, we have learned that normal blood-serum is by no means a very favourable soil for the growth of bacteria, provided that they are in an attenuated condition—not in too strong a dose. I may illustrate what I mean by a simple experiment. If we draw blood, with antiseptic precautions, say from a horse or from an ox, into purified stoppered bottles, and simply place them in a stove at the temperature of the human body, the blood remains permanently unaltered. If I dip the point of the finest needle into already putrefied blood and touch the blood in one of those bottles with the needle so contaminated and replace the bottle in the stove, to an absolute certainty within twenty-four hours the blood is foul and putrid throughout. But if instead of applying the putrid blood in substance I mix it with an abundance of sterilised water, so as to diffuse the bacteria widely, at the same time washing them of their products, I find that a small drop of this diluted putrid blood, though it contains abundance of bacteria, fails for days together to induce putrefaction. The grossly putrid material—if I may so speak—inevitably causes putrefaction in the blood, but the washed and widely diffused bacteria are unable to do so.[1] Then there is another even more important point, and that is that the living animal body has the power of defending itself against microbes introduced into it, chiefly, as it appears, by the process of phagocytosis, which Metchnikoff has revealed; so that if the micro-organisms are not introduced in too large a dose they are consumed by the wandering cells. These two great truths, then, have been taught us by advancing science: that normal serum is not a good soil for the development of attenuated microbes, and that bacteria introduced among the tissues, if in not too concentrated a form, are disposed of by phagocytosis. The result is that microbes in the form in which they are present in the air are unable to develop in our wounds; and thus we are able to disregard in our operations the once dreaded atmospheric dust.

Hence we may dispense entirely with irrigation, whether in the form of the spray, which was a kind of irrigation, or in any other; in fact, our operations may be performed with just the same simplicity as in former years. What we have to attend to is to prevent the entrance into our wounds during operations of the grosser forms of septic mischief, such, for instance, as exist in impure sponges, on dirty instruments, or in any unclean material upon our hands or on the skin of the patient. Then, again, the *entourage* of the seat of the operation must be considered. To speak first of this last point, we cover the region round about the field of operation with towels soaked in a trustworthy antiseptic solution and then we are quite sure that if we touch any neighbouring object there can be no chance of our contaminating the wound as the result of this contact.

As to the best means of purifying the sponges &c., it appears that there is after all nothing better than the agent which I happened to employ first—carbolic acid. There was a time when, in consequence of Koch's publications on the subject of corrosive sublimate, it to a large extent displaced carbolic acid in the practice of surgeons. It turns out, however, that Koch, able as he is, was misled on a certain point which led him greatly to exaggerate the germicidal power of corrosive sublimate, and that in truth it is for surgical purposes very inferior to a solution of carbolic acid in water. It is a happy thing for us as surgeons that those organisms which have the most resisting spores do not trouble us in surgical work. For instance, the hay bacillus, which is sure to grow in an infusion of hay left exposed for a while, has spores of an exceedingly resisting kind; but, supposing the hay bacillus to get into a wound, it would do no harm whatever. Again, the anthrax bacillus has very resisting spores, but if we take good care that the catgut which we use has been treated with an antiseptic that will certainly kill any spores of anthrax with which the sheep might have been affected that furnished the intestines for the catgut, we shall never have any chance of anthrax getting into our wounds. What we have to deal with, as our surgical enemies in the shape of microbes, are almost exclusively sporeless micrococci. Some of these, however, are much more resisting than others. The staphylococcus pyogenes aureus, a very common cause of suppuration, is very resisting. Now it has been shown that in such solutions as would be used in surgery carbolic acid destroys this organism much more rapidly than bichloride of mercury does.[2]

There is, however, one spore-bearing bacillus with which we have to deal but too often as surgeons—namely, the tubercle bacillus. Some experiments were made a few years ago by M. Yersin, at the Institut Pasteur, on the germicidal action of various agents upon tubercle bacilli grown in pure culture on glycerine jelly. I will not enter into the details of his experiments, but if you refer to his paper[3] you will see that they are very beautiful and very trustworthy. He found that a watery solution of carbolic acid 1 in 20 killed the bacilli in thirty seconds; carbolic acid 1 in 100 killed them in a minute; while corrosive sublimate 1 in 1000 required ten minutes for their complete destruction.

But though the bacilli of tubercle, as grown in this way, seem really to have had spores, yet those spores are in a less resisting form than we meet with in our surgical work as they grow in the living body. In sputum, for example, they are much more resisting. Accordingly I lately asked my colleague, Professor Crookshank, to make some experiments for me with reference to the bacilli of tubercle as they exist in phthisical sputum, and

[1] Transactions of the International Medical Congress, 1881, vol. ii., p. 372.

[2] Behring, Ueber Desinfection &c., Zeitschrift für Hygiene, Neunter Band, 1892, p. 417.

[3] Annales de l'Institut Pasteur, tome deuxième, 1888, p. 60.

he has been good enough to do so. I may refer in detail to the method of procedure. On Dec. 13th, 1892, three guinea-pigs were inoculated under the skin of the thigh with a little of the sputum treated with carbolic lotion. Some of the liquid sputum was introduced into a test tube; to this was added the solution of carbolic acid 1 in 20, about five times the volume of the sputum. This was shaken up freely and after a certain time the supernatant liquid was poured off from the precipitate. Sterilised water was then poured in abundantly and shaken up with the precipitate to wash out the carbolic acid; and of the precipitate which again formed a little was introduced by means of a sterilised pipette under the skin of the animal's thigh. If the bacilli were destroyed, no harm would result to the animal; if, on the other hand, they remained alive, the fact would declare itself in due time by enlargement of the inguinal glands affected by the tubercle. One portion of the sputum was subjected to the action of the carbolic lotion for one minute, another portion for an hour and a third portion for four hours. Three control experiments were performed—that is to say, three guinea-pigs were inoculated with sputum which had not been acted on by carbolic acid at all, but treated in a similar manner with sterilised water. I saw those guinea-pigs yesterday. The three which were inoculated with the sputum on which carbolic acid had not acted had all great enlargement of the inguinal glands of that side, showing that tubercle had developed there. The one that had received sputum acted upon by the 1 in 20 carbolic solution for one minute had indeed enlargement, but exceedingly trifling compared with that in the other three. The two inoculated with sputum on which the carbolic acid had acted longer—in one case for one hour and in the other for four hours—appeared to have absolutely sound groins, showing that the tubercle bacilli, in this most resisting form in which we can find them, had been perfectly destroyed by the carbolic acid solution 1 in 20 acting upon them for those periods of time, while even one minute had been sufficient very materially to affect them.

Now this is to me a very satisfactory matter, because it gives experimental demonstration of the truth, of which I have long been convinced by experience, that we need not fear tubercle bacilli in our sponges if we keep them for a considerable time in 1 in 20 carbolic lotion. The way in which our sponges are treated is this: they are washed well with soap and water and afterwards with soda; then thoroughly washed again with water; and finally, after drying, put to steep in 1 in 20 carbolic solution till they are again required for use. For my own part, I purify my sponges for private operations in a somewhat rough-and-ready way. I put the sponges after an operation into a tank of water and let them putrefy there. The fibrin, which clings among the pores of the sponges, becomes liquefied by putrefaction. They can then be washed thoroughly clean of their fibrin, and the washing is continued until they no longer give a red colour to water. They are then put into 1 in 20 carbolic solution and kept there. In my Edinburgh practice I used to proceed in a bolder way. Taking the sponges out of the putrid tank I washed them in water; and sometimes if I was in a hurry, even before the water which came from them was completely freed from red colour, I dipped them into the 1 in 20 carbolic solution and took them at once to my operations. I have before now applied a sponge so treated immediately to a wound for the purpose of exercising elastic pressure and absorbing blood and serum from it, and then put on my external antiseptic dressing over it without any bad result. These facts taken together will, I think, be enough to convince you that it is not necessary, as is sometimes done, to discard these most valuable articles and substitute for them sterilised cotton wool or tissue of one kind or another—incomparably inferior to sponges for the purpose of absorbing blood.

This same 1 in 20 carbolic solution is what we use for purifying our instruments, our hands and the skin of the patient. For the instruments, it is very much more convenient to be able to purify them by a solution like this than to boil them, as is sometimes the fashion at present. It is all very well in a large hospital where you have conveniences for the purpose of heating to any temperature you please the instrument or whatever it is you wish to sterilise, but for private practice it is a most inconvenient thing to have to boil your instruments; and even when you have boiled them and brought them sterilised to your operation, it often happens that an instrument falls upon the floor or comes in contact with some source of contamination. You cannot boil it again before going on with the operation, but the bath of carbolic lotion at once puts it right.

As to the length of time for which the instruments should be kept in the solution, a good deal depends upon the care with which you wash your instruments before putting them away. Any which have teeth, such as forceps, require special attention. They should always be brushed with a nail-brush before they are dried, so that there may be no crusts of dried blood upon them which the carbolic lotion might require a considerable time to penetrate. If this has been done, a very short period is sufficient for sterilising. In private practice I put the instruments into 1 in 20 carbolic lotion just before the patient is brought into the room. They continue to be kept in it during the administration of the anæsthetic and during our other preparations, and this is quite adequate for the purpose. It is of great importance that we should not make things unnecessarily complicated.

So also with the purifying of the skin of the patient. It is not needful to apply an antiseptic lotion for hours together, as is sometimes done; a few minutes' action of the 1 in 20 carbolic solution is really sufficient. For purifying the eyelids before ophthalmic operations the carbolic lotion would cause serious irritation. In this special case a weak solution of corrosive sublimate, applied in compresses, is probably the best. It must, however, be continued for a lengthened period.

While carbolic acid is more trustworthy as a germicide for surgical purposes than corrosive sublimate, it is in other respects also greatly to be preferred. Carbolic acid has a powerful affinity for the epidermis, penetrating deeply into its substances; and it mingles with fatty materials in any proportion. Corrosive sublimate solution, on the other hand, cannot penetrate in the slightest degree into anything greasy; and therefore, as the skin is greasy, those who use corrosive sublimate require elaborate precautions in the way of cleansing the skin—treating it with oil of turpentine or ether, not to mention soap and water, to remove the grease which they feel it essential to get rid of for the efficient action of the corrosive sublimate. Now all this is unnecessary care if you use carbolic lotion. I can testify to this from very ample experience. For my part, I do not even use soap and water. I trust to the carbolic acid, which by its penetrating power and great affinity for organic substances purifies the integument in a way that inorganic salts, like corrosive sublimate, cannot.

Our sponges during the operation are washed with 1 in 40 carbolic lotion. You will see how important it must be to have your nurses and other assistants careful. In truth it needs no small pains to teach them to take the care, simple as it is, yet all-important, that is requisite for avoiding the contamination of a wound with gross septic material. Finally, because we cannot be always quite certain of our assistants being as careful as we wish, before we close the wound, we wash it with 1 in 40 carbolic lotion. This irritates very much less than the spray, which applied a stronger solution during the whole operation; and in proportion to the diminished irritation there is less serous effusion and therefore less necessity for drainage.

(To be concluded.)

HAMPSTEAD SEWERAGE QUESTION. — The residents of Frognal have held another meeting to consider the report of the surveyor of the vestry relative to the nuisance from sewer gas in the Frognal district. The committee were of opinion that the remedies proposed by the surveyor were quite inadequate and an answer to that effect was unanimously adopted. It was also resolved that copies should be sent to the Hampstead Vestry and the London County Council. The latter, it appears, has charge of the sewers from which part of the nuisance arises, and the Council has been solicited to exercise its powers with the view of the subject being effectually examined and dealt with.

LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY, LIMITED.—A well-attended meeting was held at the residence of Mr. T. A. Ives Howell, Wandsworth, on Jan. 20th, to form a South-Western (No. 2) Division of the above Society. Mr. Howell presided, and on a motion proposed by the chairman and seconded by Dr. Dumville Roe it was unanimously resolved, after hearing the explanation of the objects and working of the Society, to form a division. Mr. Howell was unanimously elected President and Dr. Dickinson honorary secretary. Drs. Roe, Dickinson, Barkwell and Murray, and Messrs. Mark Robinson, J. Gay, A. Dodson, Farrar, and others were appointed members of the Council.

Lettsomian Lectures

ON

SYPHILITIC AFFECTIONS OF THE NERVOUS SYSTEM.

Delivered before the Medical Society of London on Jan. 23rd, 1893,

BY JOHN S. BRISTOWE, M.D. LOND., LL.D. EDIN., F.R.S.,

CONSULTING PHYSICIAN TO ST. THOMAS'S HOSPITAL.

LECTURE II.

MR. PRESIDENT AND GENTLEMEN,—Before bringing my remarks on syphilitic disease of the arteries of the brain to a conclusion, I wish to place before you two cases, as I believe, of this affection; in one case the symptoms resembled those of general paralysis of the insane, and in the other the main symptoms were those of chronic dementia. A carman aged thirty-three came under my care on Nov. 11th, 1889. His family and personal history were both good, and he did not acknowledge that he had at any time had syphilis. His illness began in July with pain referred to the back of the head. This soon became constant, though liable to exacerbations, and associated with sleeplessness and low spirits. In the course of a month or two he began to find some difficulty in writing, and a little later tremulousness of the hands and lips was observed, his speech became affected and his memory began to fail. On admission he was still suffering from all the symptoms above enumerated. He answered questions sensibly; but his speech was slow and hesitating, and attended with slight tremors of the lips, specially noticeable at the beginning of words. The tongue also was slightly tremulous. His pupils were unequal, the right being the larger, but acted to light and accommodation. There was no strabismus or nystagmus and the fundi were normal. His hands were markedly tremulous. He wrote slowly and hesitatingly and his handwriting was shaky. He could walk without difficulty, could stand with eyes shut and turn readily. The tendon and plantar reflexes were very brisk. There was no paralysis and no impairment of the senses, and the abdominal and thoracic viscera appeared all to be healthy. For a few weeks there was no material change in the patient's condition. Early in December, however, he became more and more stupid and drowsy, restless (mainly at night), frequently attempting to get out of bed for no obvious purpose, and needing a special attendant; his speech, still attended with tremor of the lips, became unintelligible, his muscular strength failed generally, and he passed his evacuations without control. It was thought at this time that the right side generally was a little weaker than the left, and that the mouth was drawn to the left. There was knee-clonus on the right side. He continued for a couple of weeks to get worse physically and mentally, passed into a state of almost complete coma, and it was thought that the fatal end was approaching. But at the end of this time he began, almost imperceptibly, to mend, and in the course of another week was better and brighter than I had ever seen him. The improvement was maintained, and on Jan. 20th he was discharged in much better health than when he was admitted. Indeed, but for slight hesitation in his speech, tremors of lips and hands and inequality of pupils, he appeared to be a healthy man. All traces of the suspected right-sided paralysis had disappeared. It may be added that during his residence in hospital his temperature ranged for the most part between 99·2° and 101·4°, and that he was treated with iodide of potassium and mercury.

The man was readmitted on March 15th, 1890. It appeared that for three weeks after leaving the hospital he had remained fairly well, but that then his headache returned, he became dull, taciturn and stupid, and took to his bed. On admission he was semi-comatose, his face was expressionless, he took little or no notice of what was going on, and answered questions only in monosyllables; his pupils were still unequal (the left being now the larger) but acted to light and accommodation, and the fundi were normal; his lips trembled in speech, and his hands were tremulous. He could stand and even walk totteringly with assistance; the tendon reflexes were extremely brisk. He remained under treatment for eleven days, during which time he got into the same state as he had been in when at his worst in his previous illness, but towards the end of this period it was observed that his left arm and leg were becoming decidedly weaker than their fellows, and that his eyes diverged. His temperature during this time varied between 95·4° and 98°. On the 26th he passed into a state of complete coma, and his temperature (which had been 99·8° the evening before) rose from 102° in the early morning to 106° at 4 P.M., shortly after which he died.

The resemblance of this case to one of general paralysis was obvious during life, but it was not a typical case, and notwithstanding the absence of syphilitic history it was suspected to be syphilitic and treated accordingly. The necropsy therefore was looked to with interest. There were no external marks of disease. The calvaria was unsymmetrical owing to considerable thickening of the bone overlying the right fissure of Rolando; this thickening caused not only external prominence, but also encroached on the cavity. The dura mater and sinuses were normal. There was considerable excess of subarachnoid fluid over so much of the convexity of both hemispheres as corresponded to the following convolutions, which were manifestly wasted: the posterior half of the first frontal, the posterior end of the second frontal, the upper two-thirds of the descending frontal and the upper third of the ascending parietal. There was also considerable jelly-like œdema at the base of the brain, embedding the basilar artery, the circle of Willis and the optic chiasma. There was no recent meningitis, but the opposed surfaces of the frontal lobes were strongly adherent. The substance of the brain generally was healthy in colour and consistency, but in the anterior end of the right optic thalamus there was a small recent hæmorrhage with petechial spots around, the whole measuring about half an inch across, and a similar patch the size of a pea was found just under the grey cortex near the hinder extremity of the right fissure of Sylvius. The basilar artery was diseased from end to end, the walls much thickened, white, fibrous, but not calcified, and it was lined throughout with an adherent layer of old decolorised clot, which peeled off like a diphtheritic membrane. The first inch of each middle cerebral was similarly diseased, but contained no ante-mortem clot. The spinal cord and membranes were healthy. Beyond slight atheroma of the first part of the aorta and congestion of the base of both lungs no further disease was discovered.

The second case was that of a married woman aged forty-six, who came under my care on Feb. 24th, 1887. There was no history of antecedent illness. About two years previously she began to suffer from headache and some change in her mental condition was observed. Twelve months later she consulted Mr. Bell-Irving for shooting pains in the back of the head and in her arms. A fortnight after this she fell down in a fit and remained semi-comatose for the next four days. After this she presented considerable physical weakness, with exaggeration of tendon reflexes and cloni in both lower extremities and tremulous movements in the right arm and leg, and she became forgetful and emotional. About seven weeks before admission she had a second fit, attended, like the former, with unconsciousness lasting for several days. After this fit her mental powers still further deteriorated, the relative weakness of the right arm and leg increased, she suffered from attacks of headache followed by shivering, and her eyesight, which had been failing for a year or two, became much impaired. Her temperature while under Mr. Bell-Irving's care never rose above the normal. On admission the patient was a thin woman, unable to give any account of herself, answering slowly and with hesitation, and soon stopping, either from confusing words or from uncertainty of memory. There were no obvious tremors of the lips. There was no facial paralysis, but the head was turned to the right, and there was conjugate deviation of the eyes in the same direction. Rotatory nystagmus was sometimes observed on both sides. The right pupil was larger than the left, but both pupils acted to light. She appeared to see obscurely, but could not count fingers. Both optic discs were atrophied; there was no definite paralysis of the limbs, but the grasp of the right hand was weaker than that of the left, and in standing or walking (which she would only attempt when strongly supported) she had a tendency to lean or fall to the right. No anæsthesia; knee-jerks brisk; ankle-clonus on right side; pulse 104, small, tense; urine, specific gravity 1012, with a trace of albumen and a few hyaline casts.

In the evening she had a fit, in which she was unconscious for a few minutes and was slightly convulsed. The temperature rose to 100·2°. During the next fortnight there was little change in her condition; she was generally drowsy, but at times fully awake, and although she was forgetful, weak-minded, did not know where she was, and suffered from delusions, would at these times generally answer questions readily and even flippantly, showing some sense of humour and readiness of retort. Occasionally she would get out of bed and grope her way round it, and was apt whilst in bed to pick at things, especially with the right hand, and to sit up and turn round, mainly to the right, and to grope and fidget with her hands as though she were engaged in disentangling herself from things about her. The nystagmus and deviation of head and eyes continued, but on one or two occasions the right eye was seen to turn in to the inner canthus. The left never even reached the middle line. The pupils still acted to right, but she had apparently become quite blind. The right hand still trembled when she tried to use it. When she stood she still had a tendency to fall to the right. She took food well, but never tried to help herself. She appeared to have power over the rectum and bladder if she cared to exercise it, but for the most part she passed her evacuations incontinently. She had no headache or sickness and her urine still presented a trace of albumen. Between March 12th and 24th she became fidgety and talkative, and at the same time the right arm became more tremulous than it had been and the fingers clenched, and the grasp of the left hand became markedly feeble. During the next two or three days the paralysis in the left side gradually increased, the right arm at the same time becoming more rigid. It was noted too that the left pupil was larger than the right and did not act to light, and that the right eye still occasionally moved independently to the inner canthus. She was sick at times and gradually grew more and more drowsy and stupid. On Oct. 24th the eyes were examined again. At this time the right pupil was the larger and both acted to light, and the discs presented as before much grey haze at the margins, which could not be defined. On the 26th the muscles of the face quivered a good deal. On the 28th she was absolutely unconscious and lay with her month open and was unable to swallow solid food. She was now evidently sinking; her pulse became rapid and weak; her respirations assumed the Cheyne-Stokes character; her eyes twitched and still deviated to the right and presented rotatory nystagmus; her tongue within her mouth was constantly jerking forwards and to the left at the rate of thirty-four in the minute; her temperature, which had been normal, rose to 103·8° shortly before death, but had fallen to 101·4° at the time of death, which occurred on the morning of March 29th.

Necropsy.—Brain: The skull, dura mater and venous sinuses were all healthy. The arteries were very atheromatous and here and there were much narrowed. This was especially the case with both middle and both posterior cerebrals, certain parts of which were white and cord-like. The membranes about the optic nerves were opaque, but otherwise healthy. The brain generally appeared somewhat shrunken. Right hemisphere: The middle third of the ascending frontal convolution was softened to a depth of one-third of an inch. There was extensive softening of the inner aspect of the occipital lobe, reaching as far forwards as the internal perpendicular fissure and involving in its whole thickness the cerebral substance lying between it and the posterior cornu of the lateral ventricle. A patch of discolouration without softening was found in the optic thalamus. Left hemisphere: An area of softening—two inches and a half vertically, by one inch horizontally—involved the occipital lobe just behind the angular gyrus and the lower half of the superior parietal lobule and extended deeply. There were two patches of softening in the ascending parietal convolution, one half an inch above the fissure of Sylvius, the other adjoining the softened area in the superior parietal lobule. They were each about half an inch in diameter. There was superficial softening of the upper part of the cerebellum to the left of the median line and of the lateral points of the lateral lobes. The softened tissues had entirely lost their normal characters, presenting yellowish discolouration in patches and here and there small hæmorrhages. All other parts of the brain were healthy. The heart weighed 16 oz., its left ventricle was hypertrophied and there was a little thickening of both aortic and mitral valves. The kidneys were granular and weighed together 7½ oz. No other disease was found.

I admit that the opinion I have ventured to form as to the etiology of these latter cases may not commend itself to everyone, and that, as to the last especially, it may reasonably be held that the arterial disease was simply related to the contracted granular kidneys. But, on the other hand, the disease in both cases was limited strictly to the arteries of the brain, and in its character and distribution was practically indistinguishable from such as one meets with in syphilis. I must admit also that no history of syphilis was elicited in either case, but then some of the most typical and striking examples of tertiary syphilis that have come under my observation have been equally defective in the matter of history. I may further remark of the first case that its duration of only eight months was very short for one of general paralysis of the insane. And I may here confess that as regards the second case my diagnosis as to the seat of disease was wholly at fault. Misled by the association of relative weakness of the right arm and leg with conjugate deviation of the eyes to the same side, I assumed that the patient had some softening or tumour in the pons; and when, finally, more definite paralysis struck the other side I was only confirmed in my error, assuming as I did that the disease in this part had spread laterally. It is not difficult, however, to understand how extensive lesions of the surface of the brain and lesions limited to the pons may be attended with symptoms of striking similarity. I have not taken the trouble to tabulate all my cases of syphilitic disease of cerebral arteries; but the few which I have quoted confirm the views of those which hold that such disease may come on at any time after the generalisation of the syphilitic virus, in cases of inherited syphilis as well as in those in which the disease has been acquired, and independently of age or sex influence.

There are one or two points of interest presented by the cases I have adduced which seem to me to be deserving of consideration. It is, I believe, generally held that when one of the cerebral arteries becomes obstructed the district supplied by it undergoes softening and may become the seat of hæmorrhage and that the district thus affected, unless it be a very small one, never becomes reinstated. It is obvious, however, that this is a rule which is liable to exception; for in the remarkable case which I narrated in my last lecture, in which the intra-cranial portions of both internal carotids and their branches and the basilar were all obstructed by old clots, which, both from the history and post-mortem evidence, must have formed at different periods, there was no trace of softening or of any other pathological change in the nervous centres. I may add that cases are occasionally met with in which patients do recover perfectly from the effects of embolic obstruction of one of the cerebral arteries. It is an interesting fact also that whilst softening of brain-substance or hæmorrhage was usually observed in distinct association with the obstruction of an arterial trunk or branch, similar lesions were by no means unfrequently present in regions the arterial service of which appeared to be sound. Thus, in Dr. Hawkins's case, there was some disease in both internal carotids the other arteries being healthy, but there was hæmorrhage into both lateral lobes of the cerebellum. In my fifth case there were old obstruction of the left internal carotid and a cyst in the left corpus striatum, but there was also softening of the right corpus striatum, the arteries leading to which were healthy. In my sixth case the right middle cerebral was obstructed and there was softening of the middle lobe of the corresponding cerebral hemisphere, but at the same time a cyst in the left corpus striatum. In my eighth case the posterior cerebral was thickened and reduced in calibre, and there was softening of the corresponding temporo-sphenoidal lobe, but there was softening also in the pons; and, lastly, in the second case, which I have cited to-day, there was, no doubt, the association of widespread softening of cerebral and cerebellar tissue associated with widespread disease of arteries, yet none of these vessels was found to be actually obstructed, and softening was present in regions the arteries of which appeared to be wholly unaffected. The explanation I am disposed to offer of the phenomenon is the obvious one that the nutritive lesions were determined less by disease of the larger vessels than by disease of the smaller vessels leading to and ramifying in the affected districts, and that it is these latter which are often alone affected in particular districts. I base this view partly on the fact that such disease of the smaller vessels has been observed, partly on the difficulty there is in otherwise explaining the phenomenon and partly on the consideration that it serves to link together cases which both on clinical and on anatomical grounds seem at first sight to have

little connexion with one another. I may add also that in Dr. Hawkins's case and in my case of disease of the coronary arteries of the heart there were infarcts in the lungs and in the kidneys. Now in neither case was there pyæmia or source of embolism. But in Dr. Hawkins's case there was blocking up of the renal arteries and disease of the ramifications of the pulmonary artery, to the presence of which the infarcts were doubtless attributable. In my case no such disease of pulmonary or renal arteries was discovered, but it seems to me reasonable to assume that the hæmorrhage was determined by obstruction of the smaller or microscopic arteries. I have seen infarcts in the lungs and kidneys in other syphilitic cases. In connexion with this subject, I venture to recall a case which has been a puzzle to me ever since I made the post-mortem examination on it in 1852. It was that of a man aged thirty-seven who was admitted with obscure febrile symptoms and who died ultimately of pyæmia arising out of an intercurrent attack of cellulitis. There had, I believe, been no symptoms suggestive of brain disease. At the necropsy the brain and its appendages were found healthy with two exceptions: the one being the presence of undue thickening and opacity of the subarachnoid tissue; the other that the minute arteries in the cerebellum and corpora striata were almost universally calcified and projected from the cut or broken surfaces like needles. Beyond the evidences of pyæmia there were no traces of disease throughout the body. I have often wondered whether this condition, unique in my experience, could have been a consequence of old syphilitic disease of vessels. I by no means venture to commit myself to an opinion. I simply put a curious case on record and make a suggestion.

This short discussion on the subject of syphilitic disease of the capillary arteries leads me to make a remark or two on syphilitic disease of the veins. I am not aware that any special attention has been given to this affection, and I confess that I have very little to say about it. Mr. Hutchinson, in his book on Syphilis, gives a short account of "periphlebitis as a consequence of syphilis," and without quoting his description I may say briefly that I have notes of a case or two which probably belong to the same category; especially that of a gentleman between forty and fifty years of age who had a chancre twenty-five years previously, who had had what he termed "boils" on his legs, leaving deep scars, some ten or fifteen years later, and, apparently originating about the same time, large varicose veins in one leg below the knee. He consulted me for a very serious syphilitic outbreak limited to that leg in which unquestionably the veins were implicated. I recollect also a very interesting case which I published some years ago of a man of middle age who came to me with symptoms suggestive of an intra-thoracic tumour. He had obstruction of the superior cava or both innominates, with great dilatation of the veins of the neck and of those in the thoracic walls, much congestion and œdema of the head and neck, and severe dyspnœa. But he had had syphilis, as was shown by ulcerative destruction of the palate, and he was cured speedily by anti-syphilitic treatment. I assume that in this case there were gummata about the base of the heart obstructing the veins either by pressure or by extension of disease into their walls. I may further point out that the cerebral venous sinuses are often similarly involved in the progress of gummatous affection of the dura mater. I cannot call to mind any case in which such obstruction has of itself led to any serious consequences; but I shall presently narrate a case in which the cavernous sinus appeared to have been obliterated. Dr. Hawkins's case of apparently syphilitic obstruction of the renal arteries has brought to my recollection a case of thrombotic obstruction of the renal veins which may have been syphilitic (but of that you will be able to judge as well as myself), and is certainly worth recording. The case was that of a woman aged thirty-seven, on whom I made a post-mortem examination in March, 1852. She had tubercles in her lungs but none anywhere else. The kidneys were much enlarged, measuring about 5½ in. in length, 3½ in. in breadth, and 2 in. in thickness. Their surfaces presented several irregular depressed blackish patches. On section the cortical substance was pale, succulent, and in many places reticulated, as though the tissue had become rarefied and the interstices filled with serum. "They presented several opaque whitish circumscribed patches, which had the appearance of tubercular, or perhaps more properly of fibrinous, deposits, being firmer and less cheese-like than the former," and they corresponded to the depressions seen on the surface. The renal veins were much thickened and in their whole extent filled with old decolourised adherent clot. On tracing the branches into the kidney these, almost to their smallest ramifications visible to the naked eye, were similarly filled. The clots were prolonged from the veins into the cava, where they presented rounded ends which were turned upwards in the direction of the bloodstream and came into contact with one another and partly blended. I gave a microscopic description of the parts which it is not worth while to refer to here. In the above account I have quoted my original words. I have no doubt now, as I evidently thought then, that the patches in the kidneys were not tubercular. Were they gummata or simply old infarcts? Had the obstruction been in the arteries there could be little difficulty in deciding in favour of the latter alternative. But venous obstruction does not, so far as I know, cause infarcts. The patches were just like gummata in the spleen or liver; and when I used the expression "fibrinous deposits" I was undoubtedly thinking of what were then termed "knotty tumours" of the liver—tumours which we now know to be syphilitic.

I do not propose to describe gummata. It is sufficient for my purpose to remark that they develop mainly in connexion with the dura mater or other membranes of the brain, and tend, according to their seat of origin and direction of spread, to become embedded in the brain substance, to grow along and involve nerves, and to implicate the venous sinuses and even the arteries; that they form tumours varying, roughly speaking, from the size of a pigeon's egg to that of a pin's head; and that in their origin and progress they are apt to be associated with more or less of what resembles ordinary inflammatory process and exudation which extend beyond and around them, causing thickening, adhesion, and matting together of membranes, and infiltration of neighbouring nervous tissue. It might be difficult to determine in any case how far these latter conditions are truly specific and how far they are due to simple inflammation excited by the irritation of the gummatous growths. But considering that these are essentially only inflammatory growths due to the irritation caused by the specific virus, and that their characteristic, microscopic and coarser features are by no means so universally distinctive as to render their diagnosis in all stages of their development and in all situations a matter of certainty, it may reasonably be assumed that these outlying and sometimes independent tracts of apparently simple inflammation are in large proportion, if not always, themselves specific.

My first acquaintance with cerebral gummata was made in March, 1854, when I conducted a post-mortem examination on a patient under the care of the late Dr. Barker. The case was one of cerebral disease, but no clinical record has been preserved, and I need scarcely say that neither I nor anyone else recognised the true significance of the lesions which I found and described. These, however, clearly interested me very much at the time and I described them carefully, and my description is conclusive as to their nature. The patient was a woman aged thirty. There was no disease of the thoracic or abdominal viscera. The calvaria was healthy, and so also were the membranes and surface of the brain seen *in situ*. On removing the brain, however, it was observed that several of the nerves at the base were diseased and also that the basal dura mater was affected in patches. The right third nerve, from its apparent origin to a short distance within the cavernous sinus, was irregularly enlarged to three or four times its normal diameter, somewhat indurated, of a yellowish-grey tinge, markedly translucent and slightly vascular. The left third was affected similarly, but to a less extent. The right fifth nerve was for the most part natural, but its trunk presented a small fasciculus of diseased fibres. The left fifth, with the exception of its motor part, was affected in its whole thickness for about half an inch of its length, beginning from its apparent origin. The diseased part was indurated, thickened and irregular. The distal part of the nerve was normal in character but reduced in size. A few of the branches of origin of the right pneumogastric were affected, and the left spinal accessory was very considerably diseased. All the other nerves were healthy. There were patches of diseased dura mater on the hinder surface of the posterior clinoid processes, on the under aspect of the tentorium cerebelli at its attachment to the apex of its right petrous bone and on each side of the foramen magnum. These appeared to have originated in the free surface of the membrane, were severally about the size of a silver penny in area, but irregular in outline, a line or two thick and nodulated on its surface. They had a translucent jelly-like appearance, a yellowish-grey tint, and were very soft. A few small nodules of like character studded the visceral arachnoid

about the pons and at the commencement of the vertebral canal; and one the size of a pea sprang from the left vertebral artery. It appeared to me that the disease was everywhere of the same character, and that the morbid material infiltrating the diseased nerves was identical with that forming independent outgrowths. I described them as consisting microscopically of an interlacement of delicate fibres, thickly studded with round or oval nuclei about as large as blood-corpuscles. The brain substance was universally healthy. The arteries at the base presented a few spots of atheroma.

In February, 1859, I examined a case under the care of the late Dr. Peacock which may be quoted here, although I do not pretend to know what the nature of the disease was. The patient was a single woman aged twenty-three who no doubt died with symptoms of cerebral disease, since I was only allowed to examine the brain; but no clinical account of the case has been preserved. The dura mater was adherent at many points to the brain, and on removing the calvaria many fragments of brain substance (corresponding to these points) were removed with it. The surface of the brain was studded with pearly, cartilage-like bodies, rounded or lobulated in form and varying in size between that of a poppy-seed and that of a tare. They appeared to be connected mainly with the pia mater. They were sparsely scattered over the general surface of the cerebrum, but were more abundant over that of the cerebellum. They were most numerous at the base, especially about the olfactory nerves, along the Sylvian fissures, in the region of the circle of Willis and on the surface of the pons and medulla oblongata. They had a tendency to be connected with the vessels and to beset the nerves; thus, they encased the optic nerves, studded the fifth pair very thickly and (though in a somewhat less degree) all the other nerves. A few were present in the choroid plexuses, and where the brain adhered to the dura mater there were growths of the same nature in the dura mater itself. The brain generally and the arteries at the base were healthy. I described the bodies as consisting of bloodvessels, nuclei and fibroid tissue, the nuclei being for the most part globular, refractive and nearly homogeneous. I have never seen a similar case. I was quite sure and am still sure that it was not a case of tubercle. But I am not equally sure that it might not have been syphilitic.

The first case with a clinical history which I shall bring before you is that of a man aged twenty-eight, who came under my care on March 19th, 1890. He was not in a condition to give a trustworthy account of himself, and the following history was obtained partly from himself but mainly from his friends. He had had syphilis, but when and whether he had had secondary symptoms could not be ascertained. In December, 1888, a hard lump formed on the top of his head, which after a time subsided without ulceration, leaving a deep depression. In June, 1889, he had a fit, and for several days afterwards complained of weakness and pain in the left temporal and frontal regions. In July he had a second fit, beginning with a cry and attended with left-sided convulsions. A third fit occurred a month or two later. During all this time, excepting while suffering from the immediate effects of his fits, and till Christmas, 1889, he continued at work. At this date the headache, from which he had continued to suffer off and on, became much more severe and persistent and his spirits depressed. In the beginning of March, 1890, he became strange in his talk and behaviour. On admission he was a thin, pale man, lying quietly in bed in a drowsy state, answering questions slowly and incoherently and complaining of headache. His articulation was slow and hesitating, and he spluttered over some of his words, so that at times it was impossible to understand him; but there were no tremors of the lips or tongue. The right pupil was larger than the left, and neither acted to light nor, so far as could be made out, to accommodation; there was no paralysis of the eye muscles, nystagmus or abnormality of the discs, but there was a small patch of choroiditic atrophy in the left yellow spot region. A depression one-third of an inch deep and admitting the tip of the finger was found near the centre of the vertex, but was free from tenderness or scar. There was no trace of paralysis or of affection of the nerves or of scars or eruptions on the skin. The abdominal and thoracic organs appeared healthy, and he passed his evacuations consciously. No change occurred until April 11th, when it was observed that there was weakness of both internal recti. On the 15th I noted "that he had been getting weaker and more drowsy and stupid and subject to delusions; that he had distinct paralysis of both internal rect but mainly of the right one, the right eye being incapable of moving inwards beyond the middle line; that there seemed also to be slight impairment of the upward and downward movements and a tendency for the right lid to droop." On the 18th, for the first time, the lower part of the right side of the face, the right arm and right leg were manifestly weaker than the corresponding parts on the left side, but the tongue did not deviate. He was now beginning to pass his evacuations into the bed. He continued gradually to get worse; more and more apathetic and drowsy and difficult to rouse, though still presenting occasional intervals of comparative brightness and intelligence; the paralysis of his third nerves increased, especially in respect of the inward and upward movements of the eyes and the raising of the eyelids, although even to the last he could elevate the latter with an effort; the right-sided hemiplegia remained without change. On May 5th, on the evening of which day he died, he was in a state of complete coma, lying on his back with eyes divergent and incompletely closed, breathing quickly, with rapid pulse, perspiring skin and an occasional slight cough. His temperature, which had generally been subnormal, rose a little during the last few days of life and shortly after death (which took place at 10 30 P.M.) was found to be 107°.

Necropsy.—There was no cutaneous scar at the seat of the depression in the vertex; but the subcutaneous tissues, including the periosteum, were thickened and scar-like. The brain generally, its membranes and vessels were perfectly healthy; but at the base there were several small gummata, apparently originating in the pia mater, though more or less embedded in the adjoining nerve or brain tissue. They were all caseating internally, but presented thin translucent pinkish vascular walls. One was situated close to the right optic foramen, and was embedded, on the one hand, in the cortex at the junction of the tip of the temporo-sphenoidal with the frontal lobe, and, on the other, involved the optic nerve from its outer side to its centre, the nerve here being swollen to twice its normal size, and adherent to the edges of the foramen. Another surrounded, but did not obliterate, the left Sylvian artery, at about the spot at which the branches are given off to the central ganglia. A third was situated just beyond the hooked extremity of the left hippocampal convolution. A fourth, situated near the posterior extremity of the left occipital lobe, was embedded in the cortex and also adherent to the dura mater. The fifth involved both corpora albicantia, and sinking deeply involved also the junction of the crura cerebri as they emerged from the pons. The third nerves seemed to originate in or close to it. The tumour was fairly symmetrical, but rather larger on the right side than on the left. Beyond the facts that the pleurae were adherent, that there was hypostatic congestion of the bases of the lungs, and that the liver was adherent, superficially puckered, and presented strands of cicatricial tissue in its substance, nothing noteworthy was observed elsewhere in the body.

My next case is one that excited a good deal of interest during life. It is that of a married woman aged forty-nine who came under my care on July 22nd, 1884. She had had a large family of children, of whom four had died as infants; but no history of syphilis could be elicited. She had suffered, however, from deafness in both ears for about seven years, and she had an eruption on the back of one of her hands, attributed to an injury a few years previously, but which was certainly syphilitic. Her illness dated from the previous March, when she first complained of some difficulty in swallowing. Early in June she became an out-patient of Dr. Semon's, who found that she had paralysis of the abductors of the left vocal cord; the voice, however, was unimpaired. Dr. Semon was at this time naturally inclined to attribute her laryngeal affection to some intra-thoracic lesion. At the beginning of July she found she could not open her left eye, and then placed herself under Mr. Nettleship's care. Down to this time the symptoms had been limited to the domains of the left recurrent laryngeal and third nerves; but now they began to make rapid progress, and when admitted three weeks later the following was her condition: She was much emaciated and there was complete ptosis of the left upper eyelid and an internal strabismus of the corresponding eye. This could be moved very slightly upwards, downwards and inwards, but not at all outwards. There were nebulæ in the cornea. The right eye was healthy in every respect. The sight of both eyes was fairly good, and the pupils were equal and acted to light and accommodation. There was marked impairment, but not absolute loss, of feeling over the area of distribution of the left fifth nerve, and the temporal and masseter muscles of

this side contracted feebly, and the chin (when the mouth was opened widely) was thrown over towards the left. There was impairment of smell in the left nostril and of taste in the left half of the tongue. This organ was protruded straight. The voice was reduced to a hoarse whisper and the left cord was paralysed, mainly as regards its abductors. She had some difficulty in swallowing. The deafness in both ears was considerable, but equal. There was no paralytic affection of the limbs or trunk, and, though complaining of giddiness, she walked without difficulty. She had much pain at the vertex and on the left side of the face. There was no further sign of disease, and her digestive and other functions were all in excellent condition. During her stay in the hospital repeated examinations were made and the following additions or corrections as to her symptoms were noted: She had paralysis of the left half of the soft palate, almost complete anæsthesia of the left half of the tongue, mouth and fauces, and impairment of the sensibility of the epiglottis and larynx mainly on the left side. The facial pain, which was referred to the left ear and eye and to the lower jaw, was evidently due to implication of the fifth nerve. It was only after she had been in the hospital for three weeks that attention was called to the eruption on the right hand. But from the beginning it had been suspected that the case was syphilitic, and she had been treated accordingly. She improved in health, and lost her pains and difficulty in swallowing; but no further improvement had taken place when she left the hospital on Sept. 27th. She went on fairly well until the beginning of November, when she had three fits attended with loss of consciousness, after which she became very weak and ill and unable to walk. On Dec. 9th she had another fit and was readmitted. She was now sallow, emaciated, exceedingly weak and unable to stand; but the limbs were not paralysed. In other respects there was very little change. The anæsthesia of the left side of the face, tongue, fauces and inside of the mouth was complete. The paralysis of the left half of the soft palate was more pronounced than it had been. The tongue was still protruded straight. Her voice was inaudible, but she swallowed without difficulty. Dr. Semon reported of the larynx as follows: "The left vocal cord stands near, but not quite in, the middle line. On attempted phonation the right moves slowly towards the middle line, but does not cross it, and there remains a gap between the inner borders of the cords." The paralysis of the left temporal, masseter, levator palpebræ, external rectus and superior oblique still continued, and Mr. Nettleship noted that the superior, inferior and internal recti still acted a little. She had no recurrence of fits and little, if any, pain; she was never sick, but had absolute loss of appetite; she got more and more apathetic, and weaker and weaker, until at last she died of exhaustion on Jan. 31st.

Necropsy.—On removing the brain extensive disease was found at the base of the skull. The dura mater in the middle fossæ, sella turcica and over the basilar process was much thickened, in places to at least a quarter of an inch. The thickened tissue was for the most part firm and semi-translucent, but here and there softer and pinkish in hue. The thickening was especially pronounced in the course of the left cavernous sinus, and the third, fourth, fifth and sixth nerves were embedded in it and were followed and recognised with great difficulty. The corresponding nerves on the opposite side were also embedded in thickened membrane, but could be readily traced and appeared healthy. There was considerable thickening about the foramina ovalia. The vagus, glosso-pharyngeal and spinal accessory at its junction with the vagus on the left side were embedded in firm fibrous material, as also (but in less degree) were their fellows on the right side. The olfactory, ophthalmic, facial and auditory nerves were all free. On removing the thickened dura mater, especially on the left side, the bone was found eroded and as if worm-eaten. The fibrous tissue around the left cavernous sinus and in connexion with the sella turcica was extremely thick and contained here and there in its substance a yellow glairy fluid, looking a little like pus, but presenting only fatty detritus. The sinus itself could not be traced. The nerves in the orbits appeared healthy. The pia mater, vessels and substance of the brain and cord were healthy. In the outer and lower part of the upper lobe of the right lung was a cavity about an inch in diameter, well defined, thick-walled and full of dirty yellow fluid; and the surface of the lung corresponding to it was loosely adherent to the chest walls. It was thought to represent a softened gumma. There were no tubercles. The capsule of the liver was thickened and the kidneys were slightly granular. The left aryteno-epiglottidean fold was somewhat thickened. The left crico-arytenoidius posticus and crico-arytenoidius lateralis were atrophied and of a yellowish tint. The recurrent laryngeal and vagus looked healthy. All other organs were healthy.

The case is interesting from several points of view: one being the fact that the very first indication of intra-cranial disease was paralysis of the left recurrent laryngeal, leading to the suspicion that she was suffering from intra-thoracic disease; another being the fact that paralysis of the left side of the soft palate was associated with paralysis of the motor nerve of the larynx on the same side, and was wholly independent of lingual or facial paralysis, implying, what has of late years been proved experimentally, that the motor nerves of the soft palate and of the intrinsic muscles of the larynx are derived from the same source; a third being the fact that the cavernous sinus was involved in the syphilitic lesion and occluded.

The last two cases were cases of fairly rapid progress, and much of their interest depended, less on the actual amount of disease present within the skull, than on its situation and the implication of particular nerves. In my next case the intra-cranial disease was much more chronic; the amount present was very considerable, and especially there was a very large tumour developed apparently within the substance of the brain. The case was my own, but was recorded by Dr. Greenfield in vol. xxviii. of the Transactions of the Pathological Society.

A sawyer aged thirty-four came under my care on Oct. 5th, 1875. He had had double otorrhœa after scarlet fever when a child, and had remained liable to it since. He had had a chancre, but no rash. He had, however, had soreness of the throat and palate. Four years ago he was attacked with severe pain in the vertex, occiput, and neighbourhood of the left mastoid process; he became deaf in the left ear; and on waking one morning he found that he had lost the use of the left side of the face. These symptoms continued with little variation till the time of admission. Latterly, however, his sight had become defective and he had acted strangely. On admission there were marks of ulceration on the throat and palate, and hard glands in both groins. There was paralysis of the left portio dura, and the uvula pointed to the right. No other evidence of paralysis was obtained. His sight, however, was imperfect, he had double optic neuritis and he was deaf in the left ear. He was sensible and complained of constant severe headache and of much tenderness in the left mastoid region and over the vertex and spines of the upper cervical vertebræ. As time went on, his blindness increased, paralysis of the left half of the soft palate became unmistakable and the left external rectus became paralysed. Later it was ascertained that vision was specially impaired in the upper half of each retina, his left pupil became dilated and motionless and his left arm and leg partially paralysed. During his residence in the hospital his headache in the situations above mentioned and the pain in the back of the neck continued and he was restless and often violent. He died on Dec. 20th.

Necropsy.—The calvaria was thick, very dense, and firmly adherent to the dura mater, on removal of which its exposed surface was found rough and irregularly pitted. The inner aspect of the dura mater, especially over the right hemisphere, was adherent to the brain by a thin, soft layer of lymph, and was studded here and there, but mainly in the course of the sinuses, by irregular nodulated outgrowths, of which some were embedded in the convolutions. These were yellowish, and obviously gummata. The channel of the left lateral sinus was much narrowed by the presence of such growths in its walls. The cerebral convolutions were somewhat flattened, the pia mater injected, and there was excess of subarachnoid fluid. In the posterior extremity of the right hemisphere, occupying the greater part of the occipital lobe, was a rounded gummatous tumour, about an inch and a half in diameter. It was for the most part firm, opaque, and yellow, but here and there was greyish-red, translucent and soft. It nowhere quite reached the surface. The pia mater over the right hemisphere in irregular patches was infiltrated with a translucent yellowish material; and on close examination it was seen that many of the vessels connected therewith were thickened and converted into white cords. Excepting that there was softening in the neighbourhood of the embedded gummata the brain was generally healthy, as also were the arteries at the base of the brain. The optic nerves were somewhat swollen and the left tract wasted and softened. The right third nerve, where it passed round the crus, was slightly reddened, swollen and

soft. Both sixth nerves were flattened in their course at the base of the skull, especially the left, which was atrophied. The other nerves appeared healthy. There was no disease of the thoracic or abdominal organs. Presumably the left facial and auditory nerves were involved in the thickening of the dura mater, which also involved the left lateral sinus.

It is curious that there is no record of the occurrence of fits, which are so common and almost characteristic of the presence of gummata. It is curious, too, that until quite a late period the only paralysis present was that of the left facial nerve. In connexion with the subject of large cerebral gummata, of which the last case furnishes a noteworthy example, I will make a brief reference to another case that came under my care in 1880. The patient was a young woman who was transferred from King's College Hospital to St. Thomas's Hospital on July 14th. I received no history with her beyond the statement that she had been suffering while in King's College Hospital from unilateral epileptiform attacks. On admission she was semi-comatose. She did not speak or take notice excepting when attempts were made to move her limbs or open her eyelids, which she resented. She had no definite paralysis, but swallowed with difficulty. The right pupil was larger than the left, and neither acted to light. She had double optic neuritis. Her temperature on admission was 99·6°; the next morning it was 101·6°. Towards the afternoon of this day she sank into profound coma and her temperature rapidly rose; and just before death, which took place in the evening, it reached 107·4°. On post-mortem examination depressed scars were noted on the forehead, chest and back, and there was a syphilitic gumma as large as a hen's egg embedded in the right anterior cerebral lobe, with thickening and adhesion of the membranes over it. The vessels were healthy. The only other evidence of disease was the presence of scars on the surface of the liver and spleen.

Before I conclude my lecture I should like to quote one other case, in this instance not fatal, which presumably was much of the same character as the last but one; for in its course the ears became affected, both facial nerves became paralysed, she had double optic neuritis and hemiplegia; but additionally she had (marked evidence of syphilitic involvement of the periosteum of the skull.

A married woman aged twenty-five was admitted under my care on March 19th, 1878. After the birth of her first child she had an eruption on the legs and her hair came off. The child died when seven months old and was said to have been syphilitic. Six months previously she had a fall from a trap, struck her head and face, and was stunned and insensible for two hours; but she recovered completely in a short time. On Jan. 1st she awoke in the morning with violent pain at the top of the head, where also it was swollen and tender. An incision was made, but only a little blood escaped. Since then the pain has been almost constant. She was healthy looking, but complained of severe pains in the forehead and sides of the head and face and in the eyes, ears and teeth, which were worse at night, and of which the pains in the eyes and ears were aggravated respectively by light and noise. Her eyelids were swollen and there was puffiness and considerable tenderness over the forehead and sides of the head. She was quite sensible. There was no paralysis or anæsthesia. She had double optic neuritis. On April 27th it was remarked that the severe pain continued in the head, ears and teeth; that the headache was apt to shift, being worst sometimes in front, sometimes behind, sometimes at the sides; that there was much tenderness and œdema, especially about the zygomatic regions; that the temporal muscles acted imperfectly; that a tender swelling had appeared towards the back of the left side of the head; and that she was frequently sick. On May 26th a note was made to the effect that the pains had continued and were sometimes so severe (especially at night) as to make her scream, at which times also she was apt to be delirious; that during the last few days the pain had been localised mainly in the mastoid regions; and that her sight was failing. About a week later it was observed that she had commencing paralysis of the left portio dura, and that she complained of diplopia. At this time it was also noted that the discs were hazy, their outlines blurred and surrounded by a grey zone; that there was some swelling; and that the vessels were tortuous and the veins enlarged. The facial paralysis increased during the next week or two and then slowly subsided. In the beginning of July (by which time the œdema and tenderness had disappeared from the frontal, temporal and zygomatic regions and there was scarcely a trace of left facial palsy) she complained of pain and stiffness in the back of the head and neck and of severe pain in the ears. Soon after this, the pains continuing, she became deaf on both sides; on July 18th it was observed that since the day before she had been completely deaf and had had noises in her ears; and on or about the 25th she had a copious discharge from both ears and she could not quite close the right eye. From this date improvement, on the whole, continued, she soon lost all pain in or about the head, and she expressed herself as feeling quite well but for the gathering in her ears and "the beastly taste in her mouth." But the discharge from the ears continued, both membranæ tympani were found to be perforated, she remained almost absolutely deaf and the paralysis of the right portio dura became almost complete. She left at her own wish on Aug. 3rd, having been in the hospital nearly five months. The patient again came under my care six years later. She then stated that but for persistent deafness and occasional discharge from her ears she had quite recovered and had continued well until recently, when she had recurrence of severe headache. This became aggravated a fortnight before admission and was attended with return of discharge from the left ear. A week later she was seized with vomiting and observed that her right arm and leg were weak. On admission she was restless and moaning with pain, which she referred to the forehead and left side of the head, suffered from vomiting, and presented complete left facial palsy with slight but obvious weakness in the right arm and leg. There were traces of the old optic neuritis. She again improved under treatment and left well but for persistent facial palsy.

In this case there was evidently abundant syphilitic affection of the periosteum of the skull and not improbably of the soft parts superficial thereto. The middle ears were also implicated; and there can be little doubt that the dura mater shared in the mischief. The variable facial palsy and the deafness may have been due to the ear affection. On the other hand, they may have resulted from implication of the nerves in disease of the dura mater, an explanation which may equally apply to the pains in the domain of the fifth pair. The optic neuritis and temporary right hemiplegia point of course to the presence of intra-cranial disease. I need scarcely say she was treated systematically on both occasions with mercury and iodide of potassium.

CASE OF SYRINGOMYELIA, WITH NECROPSY.

BY JAMES TAYLOR, M.A., M.D. EDIN., M.R.C.P. LOND.,

REGISTRAR AND PATHOLOGIST TO THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, QUEEN-SQUARE, W.C.

I AM indebted to the kindness of Dr. Charlton Bastian for permission to publish the following case. I also have to thank Dr. Howard Tooth for various particulars as to the history of the patient whilst he was under his care at the Metropolitan Hospital and subsequently as an out-patient at the National Hospital for the Paralysed and Epileptic, Queen-square. The notes of the case whilst the patient was under Dr. Bastian's care were taken by Drs. Rivers, Page May and Batten. In May of last year I showed the cord and described some of the sections at a meeting of the Neurological Society.

A tobacconist's assistant aged twenty-three, single, had had fairly good health until February, 1889, at which time he was said to have had an attack of bronchitis. While he was convalescing from this illness objects seemed unsteady when he looked at them, and he walked as if he were intoxicated. After this he had weakness and tingling in his right arm, and had difficulty in swallowing liquids. His condition improved after a lapse of two months, but he still had some difficulty in walking, staggering at times and being very short of breath. In October of the same year he became worse. He was more unsteady in walking and would sometimes fall, but without losing consciousness. He had pains in his legs and objects seemed to dance before his eyes. He became steadily worse, but had no difficulty with the rectum or bladder. He became a patient at the Metropolitan Hospital and Hackney Infirmary. At the former he had a full mercurial course. His health previously to the onset of this illness was fairly good. He had measles in 1882, scarlet

fever in 1883 and small-pox in 1884. In 1886 he fractured his left arm and dislocated his elbow. He was treated at the German Hospital, but the limb remained weak and was frequently painful. Although he dated his illness from 1889 it is a significant fact with reference to what will presently

FIG. 1.

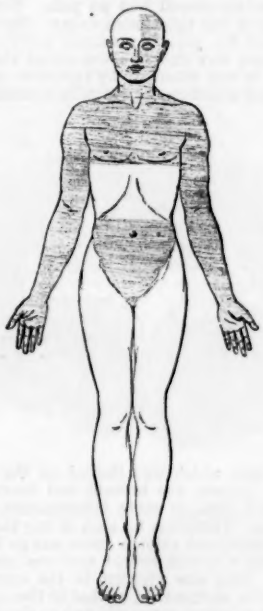


FIG. 2.

be related that in 1886 he burnt his right arm with a hot rail whilst asleep, and although the burn was so severe as to leave a scar of considerable size he suffered no pain from the accident. His family history disclosed no fact of importance. His mother was alive and suffered from neuralgia, but his father was dead. The cause of death was not known. No history of nervous disease in any relative was elicited. The patient was an only child. When he was admitted to the hospital in January, 1891, he complained of unsteadiness in walking and numbness about the left hip. He also said that objects seemed to move before his eyes. The conditions disclosed by examination were as follows: All the movements of the head on the trunk were well performed. The ocular movements

FIG 3.

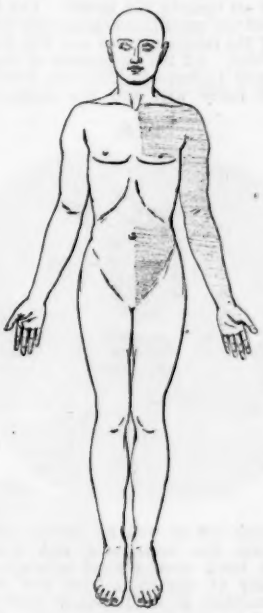
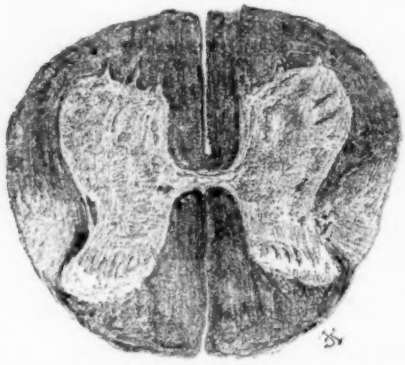


FIG. 4.

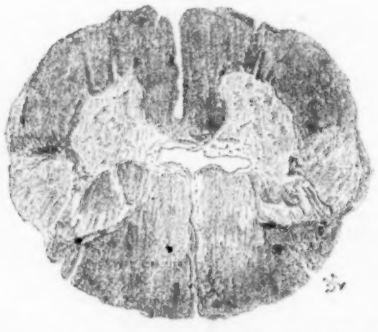
were good, although vertical nystagmus was present during rest even, and became more evident and assumed a rotatory character on lateral deviation to either side. The pupils were equal and reacted normally to light and during accommodation. No change was seen in the fundus. There was no asymmetery of the face, and the palate movement and the action of the masseters were normal. There was no deviation of the lower jaw on opening the mouth. The hearing was good. As regarded the upper limbs on the right side there was some wasting of the thenar muscles and the trapezius was definitely atrophied. All the movements of the hand and forearm were well performed. The arm could be raised above the head fairly well and the shoulder could be

FIG. 5.



shrugged, although not so well as on the opposite side. On the left side the movements and muscles about the elbow and hand were normal, although there was marked deformity of the elbow-joint and forearm, the result of the accident in 1886 already alluded to. The grasps as tested by the dynamometer were 60 with the right hand and 55 with the left. The patient was right-handed. In the lower limbs all the movements were good and there was an absence of wasting. Both knee-jerks were active; on the left side there was ankle-clonus, but this was not present on the right side. The plantar reflexes were both active, the right more so. The gait was unsteady and there was difficulty especially in turning. The patient could not stand

FIG. 6.

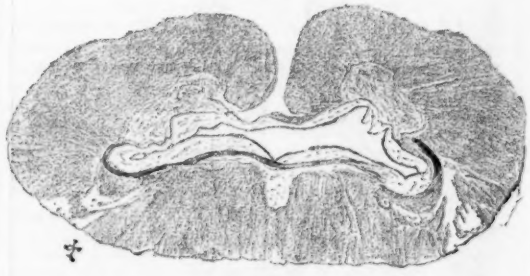


with his eyes closed. There was no dragging of the feet in walking. As regards sensation the sense of position was good everywhere except in the left upper limb, in which it was impaired at the elbow and absent in the hand and fingers, so that he was unable to tell whether the hand was flexed or extended at the wrist and whether the fingers were bent or straight. The condition of sensibility to light touches and to painful and thermal stimuli as such will be better comprehended from the accompanying diagrams than from any verbal description. In Figs. 1 and 2 the shaded areas show where thermal and painful impressions as such were not perceived. In those areas, except the parts indicated by shading in Figs. 3 and 4 (in which light touches were not perceived), and on the rest of the body sensibility to tactile impressions was not impaired. There was undue prominence of the fifth dorsal spine and some reddening and thickening over it. The heart and lungs showed no evidence of disease. An accident of some interest happened while the patient was in hospital. He one day caught hold of a kettle with his right hand. He did not notice that it was hot and the large blister which resulted caused him no pain. The blister was on the inner side of the right index finger. During the time he was in hospital the patient remained fairly well and was able to be up every day and to move about the ward. In April, however, he was attacked by bronchitis accompanied with great cardiac weakness, to which he succumbed.

FIG. 7.

At the necropsy, which was limited to the back at the request of the friends, the bronchi and bronchioles were found to be in a state of acute inflammation. The lungs were œdematous. There was no sign of any morbid cardiac condition. In the spinal column there was no bone disease. The cord was very soft and flaccid and was greatly dilated in the centre. This was greatest in the cervical region, gradually lessening downwards, so that in the upper lumbar part of the cord it was a mere slit and in the lower lumbar no unusual appearance was visible to the naked eye. The aqueduct of Sylvius was also considerably dilated. After the cord had been hardened in Müller's fluid sections were prepared from different levels with a view to answering the two questions which arise: (1) What was the nature of the anatomical change and its etiology? and (2) how were the symptoms which were present during life in this patient related to the anatomical conditions found after death?

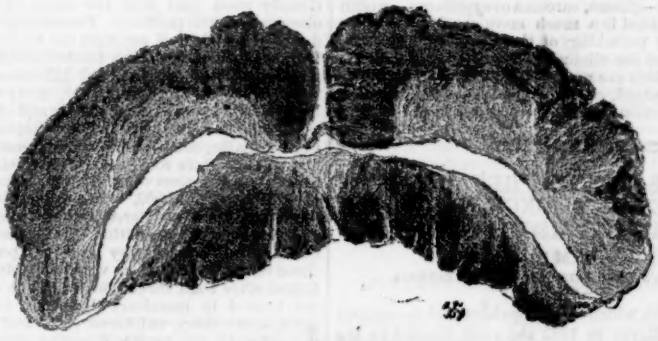
FIG. 8.



With reference to the anatomical change which was found on closer examination the accompanying figures will indicate the condition. Fig. 5 is a drawing of a section from the lower lumbar region and it can be seen that the central canal at this level is little, if at all, changed. The darkly shaded parts in these figures indicate the parts where the fibres are normal, while the lighter parts show where the fibres are deficient or absent. In Fig. 5 there is evident sclerosis in both lateral pyramidal tracts, but it cannot be said that this is more extensive in one than in the other. In Fig. 6, from a section in the upper lumbar region, the same condition is seen to be present; but there is in addition an opening of some size in the position of the central canal. This has at points, not in its entire circumference, a lining consisting of cylindrical epithelium, pointing, I believe, to

the fact that part at least of this cavity represents the true central canal. Besides the sclerosis in the lateral pyramidal tracts already mentioned, there is also at this level considerable change of similar character in the posterior columns, especially at their central ends. The anterior horns are normal and the cells appear unaltered. In Fig. 7 the cavity is much larger, extending into, and to a great extent destroying, the posterior horns. Around this cavity, most evident posteriorly, there is an area of tissue in which no nerve fibres can be detected, but which has the appearance of fibrous tissue. This passes down into the situation of the posterior fissure. The anterior horns, apart from the distortion which such a condition as is present must entail, seem to be normal. Fig. 8 is from a section in the lower cervical region, and in it the central cavity is still larger. It has here and there an epithelial lining of the same character as is visible in the sections already described. The posterior horns are here also seen to be encroached upon, and around the cavity there is a well-marked area of tissue identical in appearance with that described in the last section. In the posterior horn region there is also the appearance of sclerosis and at the central end of the posterior column there is a curious definitely marked area in which very few nerve fibres are present. There is also a scantiness of these in the posterior columns generally, most marked at the dorsal part. The presence of the cavity has also given rise to the circuitous route of some fibres, of which the origin and destination are not evident, and to very considerable distortion of the anterior horns. In the upper cervical region (Fig. 9) the cavity has reached its maximum. Here also, as elsewhere, there is visible at parts an epithelial lining. The absence of fibres is conspicuous in the region of the posterior horns, which the cavity has deeply invaded and indeed destroyed. This is also evident in the posterior columns, especially centrally, in the region corresponding to that referred to in the last figure. The anterior horns are spread out as a result of the pressure of the large cavity. Cells are visible in them in some numbers, but their outline is less clear than is usual and the ordinary arrangement in groups cannot be verified. In the medulla the canal is also enlarged, although not to any great extent. After the canal has opened out into the fourth ventricle no marked change is evident except that the whole structure appears flatter, as if its horizontal diameter had increased at the expense of its antero-posterior. Some of the bundles composing the ascending root of the fifth nerve on both sides are altered, as if the gelatinous tissue had encroached upon the area occupied by the nerve fibres. When the iter is reached this is found to be considerably dilated. As permission to examine the brain was not obtained the condition of the ventricles cannot be described.

FIG. 9.



Such are the anatomical changes; before proceeding to consider their significance, it may be well to inquire into the etiology of the condition just described. In my attempt to do so I have to acknowledge my indebtedness to the last edition of Dr. Gowers' Manual and to the exhaustive monograph by Professor Hoffmann of Heidelberg,[1] whilst in no way wishing to saddle these writers with any responsibility for statements from which they may possibly differ. The four views enunciated by Professor Hoffmann as to the etiology of these conditions in the cord are: (1) That especially of Virchow, according to which a congenital abnormality is supposed to be the determining cause of a central cavity—i.e., that a condition of syringomyelus starts as one of hydromyelus; (2) the view that a cavity or cavities in the cord are the result of central growth; (3) that which supposes that there is a chronic inflammatory process around the canal, or that there is inflammation apart from the canal and that holes are formed in the cord as a result of softening; (4) that enlargement of the canal is the result of obstruction to the blood-flow into the skull, leading to excess of fluid in the cord, which transudes into the canal and leads to its enlargement. A similar condition is supposed to arise from pressure on the cord itself by means of tumours, meningitis &c.

At the time of the necropsy on the patient whose case is under consideration the central cavity of the cord was full of fluid, and the cord, especially in the cervical region, felt like an indiarubber tube full of fluid. On examination this cavity was found to have, in parts at least, a distinct epithelial lining of the kind usual in the central canal. The tissue around the cavity may be regarded either as a form of new growth or as the result of some abnormality in development. The curious way in which it is disposed is, I think, against the former view, and I regard the latter as much more probable, especially having regard to the other conditions present. The appearance of a condition in some way resembling sclerosis, especially around the posterior horns and in the posterior columns, has been referred to At one point in particular this is very marked—viz. at the central end of the postero-internal columns and in view of the explanation of the tissue round the cana as depending ultimately on some abnormality of development it is significant that this condition of excess of connective-tissue elements at the expense of nervous is present in the posterior columns, the last large division of the cord to be supplied in the course of development with nervous elements, and is actually most marked at the point in those columns which is the last of all to be furnished with nervous tissue proper—viz., the central end. Having regard to these facts, therefore, I am inclined to look upon the condition present in this case as one of defective development in the first place, not sufficiently important in an early stage in all probability to produce at least obtrusive symptoms. On the congenital anomaly a process of growth was later, so to speak, engrafted, so that finally there was, I believe, the original condition not altered in kind but merely in degree, representing rather a process of overgrowth than of new growth.

I would now briefly allude to the second question which I have proposed—viz., What is the relation of the symptoms to the anatomical changes which were present? With regard to the face, the anæsthesia was possibly determined by the slight change in the ascending root of the fifth, and the nystagmus was probably dependent upon slight functional disturbance of the nuclei of the ocular nerves resulting from the dilatation of the aqueduct of Sylvius. So far as the condition of the cord is concerned, one fact is evident—viz., that the posterior root region and the posterior columns are most affected. To the former are probably to be ascribed the sensory impairment and to the latter may have been due the unsteadiness in walking and the inability to stand with the eyes closed. The cavity was largest in the cervical and upper

[1] Deutsche Zeitschrift für Nervenheilkunde.

dorsal regions, and to the corresponding part of the body the symptoms were, as we should expect, chiefly referred. There is no change which I have been able to associate with the presence of a zone of normal sensibility between the two zones of impairment. The distortion of the anterior horns and slight alteration in the cells, with perhaps the disappearance of some, are quite sufficient to account for the muscular atrophy, which was neither extensive nor extreme. The significance of the lateral sclerosis in reference to the exaggerated reflexes which were present is obvious. The change itself, in the absence of any other cause, may naturally be ascribed to the pressure exerted on these tracts by the great dilatation in the cervical region.

I may state in conclusion that from a consideration of this case and others which I have seen or descriptions of which I have read I believe the condition now so generally known amongst neurologists as syringomyelia to depend upon different conditions. Clinically syringomyelia is broadly characterised by muscular wasting—often bilateral—and sensory symptoms, especially changes in sensibility to temperature and pain, while ordinary tactile sensibility may remain unchanged. These symptoms depend upon altered conditions in certain structures, and these structures may be injured in association, I believe, in different kinds of cases, to all of which the term "syringomyelia" is now applied. The two chief classes are, I think (and in this I only slightly alter Hoffmann's classification)—(1) those in which there is a congenital anomaly which may afterwards take on a process of overgrowth as distinguished from development; these are characterised clinically by the very gradual onset of symptoms, lasting, it may be, through many years; and (2) those in which there is actual central new growth, frequently with cavity formation, and, it may be, associated with new growth elsewhere—glioma, sarcoma or syphiloma,—and in which the course pursued is a much more rapidly fatal one. That there are cases partaking of the characters of each, I have little doubt, but the clinical division into cases which are slow and cases which are rapid in progress will, I think, be generally acknowledged, and I believe it is correlated with the anatomical distinction which I have just stated.

Welbeck-street, W.

OBSERVATIONS ON THE PREVALENCE OF TYPHOID FEVER AMONGST BRITISH SOLDIERS IN GARRISON IN EGYPT.

BY J. MACKIE, M.B., C.M.G.,
SURGEON TO H.M.'S CONSULATE-GENERAL, ALEXANDRIA.

OF the enemies with which the troops have had to contend since they landed in Egypt in 1882 the most dreaded by the common soldier, and perhaps the most fatal, is typhoid fever. This redoubtable enemy continues its ravages in regiment after regiment not only in the stirring times of war but in peaceful garrison duty, regardless of the lines of defence which have been set up against it. Brigade-Surgeon Gore, in his medico-statistical sketch of the British army in Egypt, states that from 1882 to 1889, in the whole Egyptian command, there were 2480 admissions to hospital for typhoid fever, with 704 deaths and 619 patients invalided. During the same period there were 9830 admissions from other continued fevers, with 9 deaths and 212 men invalided. As the Nile and Red Sea expeditions occurred in those years the statistics can hardly be held to apply to soldiers in garrison. The same authority, however, states that from 1883 to 1888, 543 cases of typhoid fever were treated in the Cairo military hospital, the average strength of the garrison being in round numbers 3000. In one of these years, 1888, in addition to the cases classed as typhoid fever, 392 cases were admitted as simple continued fever, but there were no deaths. From February, 1883, to July 27th, 1888, there were treated in the military hospital at Alexandria 1683 cases of fever. The average number of the garrison is not stated, but it was much inferior to that of Cairo. Of these cases of fever 820 were returned as simple continued fever, 239 as febriculæ, 393 as typhoid fever, 196 as ague and 35 as remittent fever. These statistics may also include invalids from some regiments which returned weary and worn from the Nile expedition. With regard to regiments which have suffered severely in peaceful garrison duty I would instance the Essex, which garrisoned Alexandria in 1890–91, and the Devonshire, which garrisoned Alexandria, occupying the same barracks in 1891 and 1892. The latter regiment arrived from England in the early summer of 1891 and remained comparatively free from fever returned as "typhoid" till the autumn of 1892. Up to Dec. 31st, 1891, there were returned 119 cases of fever—viz., 6 typhoid and 113 other continued and remittent fevers. During 1892, and chiefly during the few latter months there were returned 73 cases of typhoid fever with 23 deaths; other continued and remittent fevers 155, no deaths; the strength of the regiment being about 800.

The above figures will serve to give an idea of the prevalence of typhoid and other fevers amongst British troops in Egypt up to date, but the object of this paper is not to deal with statistics, which, however interesting and useful in a general way, are, without other data, often misleading and stop the way to more precise and, I would add, more scientific observation. Simple statistics alone do not recommend themselves to the unofficial mind; in the present instance they serve, however, to show the ravages committed amongst healthy troops by a disease which we are pleased to term "preventable." My intention is to point out some circumstances connected with the recurring epidemic outbreaks of typhoid fever amongst the soldiers in quiet garrison life, well-cared for and quartered in healthy localities, in the hope that it may lead to an investigation of the means of propagation and means of prevention. My remarks must of necessity be confined to regiments quartered in Alexandria, as my means of information and local knowledge do not enable me at present to go further afield. First, then, I would remark that typhoid fever is endemic in Alexandria, cases occurring the whole year round with an increase generally in the autumn months. During the last summer and autumn, however, the general health of the population was exceptionally good, and very few cases of typhoid fever were observed in civil practice. Notwithstanding this a fatal epidemic declared itself amongst the soldiers of the Devonshire Regiment, 73 cases being treated chiefly in the few autumn months, with 23 deaths, and 155 cases of other continued fevers occurred during the year, many of the typhoid cases being of an exceedingly severe type and of a septic nature. The same was the history of the Essex Regiment and the Duke of Cornwall's Regiment, in which the disease assumed an epidemic and virulent form and propagated itself amongst the troops in garrison at a time when the civil population of the town, amounting to 240,000, was comparatively free. All these regiments were quartered outside the town in what are considered healthy localities. The water supply and food were common to the military and civil population—in fact, in these respects the soldiers were probably better off and better looked after than three-fourths of the civil population, who are housed in insanitary dwellings in small unventilated lanes, drink filthy, unfiltered water and eat bad food. I do not refer to the native Egyptian only, but rather to the foreign or general European population, which may be considered to have the same liability to typhoid fever. The barracks in which the soldiers have been quartered may leave much to be desired compared with first-class barracks in England, but so does every "okella," as every densely populated block of buildings in Alexandria is called. The proprietors of these insanitary blocks will do nothing to improve them and there is no law to compel them, whilst the military authorities, guided by the Medical Staff and Royal Engineers, have spent immense sums on sanitary improvements, but the desired effect has not been obtained and epidemics of typhoid fever recur with fatal regularity. The barracks cannot be said to be overcrowded, as for several years there has been only one regiment, not over 800 strong, in garrison, and during the hot autumn months the doors and windows are almost constantly open to admit the fresh breeze from the sea. One is forced to the conclusion that the generally accepted theory of the propagation of typhoid fever by water and drains alone will not explain such local epidemic outbreaks, and to seriously considering whether the disease, once it has obtained an entrance from without, is not propagated and transmitted from man to man amongst the soldiers themselves, gaining in virulence by transmission. That bad drains and bad water are predisposing and in many cases exciting causes is admitted, but our knowledge of bacteriology and the study of epidemic diseases teach us that we must not be too exclusive in our theories. Accepting the theory, then, as I do, of transmission from man to man, or, in other words, contagion, as the cause of these virulent epidemics, what are the means to be adopted for prevention? Before touching on this let me draw attention to facts which

stand out very prominently in Brigade-Surgeon Gore's statistics from which I have quoted—viz., the enormous number of cases returned as "simple continued fever." One naturally asks, What is this simple continued fever which prevails in an epidemic form amongst the British soldiers? The Devonshire Regiment at Alexandria in 1891 returned six cases of typhoid fever and 113 cases of other continued and remittent fevers. (I would here remark in passing that true remittent fever unconnected with suppuration or organic disease is not an epidemic disease in Alexandria.) In 1892 the same regiment returned 73 cases of typhoid and 155 cases of continued and remittent fevers, for, with an increase of typhoid fever, or fevers returned as typhoid, there is also an increase, amounting to an epidemic, of simple continued fever. Brigade-Surgeon Gore, commenting on the heavy mortality from typhoid fever during the Nile expedition, remarks "the mortality would not have been so high had all doubtful cases of continued fever and diarrhœa or febricula of *over twenty days' duration*" been included. It is very evident from this that he regarded many of the cases returned as "simple continued fever" as cases, in a milder form, of typhoid fever. This is the opinion I also hold, and is also the opinion of many intelligent military surgeons with whom I have discussed the subject here and who have had unfortunately most ample opportunities for the clinical study of fevers. What, then, is the practical bearing of this simple continued fever as entered in the War Office returns? If it is, as I believe it to be, in general a mild non-fatal form of typhoid fever, and probably the precursor of a severer form to follow, it ought to be treated, as regards preventive measures, as typhoid fever. So long as it is disregarded and looked upon as a simple harmless fever and not communicable, so long will the regiment be exposed to an outbreak in a severer and fatal form. It is probably in this mild form that the disease is first introduced from without.

With regard to propagation amongst the soldiers themselves by contagion, a point of great importance is the disposal of the clothing and bedding of a soldier who dies of typhoid fever. His serge tunic, trousers &c., I am informed, are returned to the Quartermaster's stores for reissue; small articles of kit—shirts, socks &c.—are sold by auction in the regiment; his bedding goes to the company's stores for reissue, being seldom or ever washed before being stored or reissued. The greatest opponent of propagation of typhoid fever by direct or indirect contagion would hardly, I think, have the courage to allow a member of his family to clothe himself in the clothes of a man who had died of a virulent form of typhoid fever, and who had used his clothes and his bedding till within a few days of his death, as many soldiers with a reluctance to enter hospital do.

With regard to preventive measures in addition to those generally employed, hygienic and dietetic, but which of themselves have proved insufficient, I propose early isolation of even suspected cases and rigorous disinfection according to the latest discoveries of science—disinfection of the bedding used in the barrack-room and disinfection of clothes in a thorough manner. This would necessitate the station hospital being provided with a proper disinfecting apparatus for steam under pressure, and some of the hospital corps being trained in scientific disinfection. The early detection of the disease is of the first importance, so that the soldier may be removed from barracks and isolated from his comrades. This is probably an almost insuperable difficulty, as soldiers, with their reluctance to confinement in hospital, conceal their illness even in typhoid fever till within a few days of their death; but in the face of an epidemic outbreak, with strict watching and aid from the officers, commissioned and non-commissioned, suspicious-looking cases might be denounced, and a thermometer applied in the mouth at night would decide the question, fever or not. This may appear an unpractical suggestion to officers obliged to work by official routine; but if exceptional sickness and the loss of so many young British soldiers are to be stopped exceptional measures must be employed, and routine and red-tape must give way.

Another observation with regard to barracks disinfection. When there is a change of regiment the custom is that as one regiment marches out another marches in—the marching-in one consisting often of young soldiers fresh from England—and takes up its lodgings in the barracks, which have been infected with typhoid fever by the outgoing regiment. The new regiment will soon begin to show its cases of simple continued fever, assuming later a more virulent form, to be returned as "enteric" or typhoid fever. The barracks may have been "cleaned up" for the new guests, but no time has been allowed for proper disinfection by means sufficient to destroy the virus, and the infection remains. The tenacity with which the disease clings to a regiment once thoroughly infected in barracks has been shown in the case of regiments which have been turned out into camp on a healthy part of the sandy desert by the sea-side. Cases have continued to occur for some time, more than one case frequently being sent to hospital from the same tent, the germ having been transported with them from the barracks.

What, then, is the practical outcome of these observations as regards the propagation of the disease? General sanitary measures; avoidance of overcrowding; means to be instituted for the early detection and isolation of cases of fever; rigorous disinfection of the "locale" in barracks, clothing, bedding &c., according to the latest teaching of science; camping out the healthy if the disease seems to be gaining ground, before the regiment is thoroughly infected even by the so-called "simple continued fever"—the frequent appearance of which ought to be a warning to keep the signal to "danger." There is much in the habits of the daily life of a soldier which, from a civilian's point of view predisposes him to disease when an epidemic is prevailing—and notably fatiguing drill in the early morning hours in the hot, damp summer and autumn months, without being fortified by a substantial breakfast. In the hot damp nights of autumn, when fevers usually prevail, sleep is difficult. The only sound sleep is generally obtained in the morning hours, but the young soldier, weary after a hot and probably sleepless night, and at an age when a good amount of night's sleep is essential, has to hurry up and turn out to early drill, returning to breakfast already tired and weary, to begin a hot trying day. The distribution of the soldier's meal hours is also from a civilian point of view irrational as regards healthy dietetics, but that is beyond the scope of this paper. I merely mention it as a probable predisposing cause of disease, especially in times of barrack epidemics.

The register of the Board of Health shows 50 deaths from typhoid fever in Alexandria and suburbs for the whole year 1892 in a population of 240,000 to 260,000, but the returns are not to be depended upon. Many cases of illness are never visited by a doctor during life and are certified after death by a sanitary agent in a haphazard sort of way.

Alexandria.

THE ANTI-OPIUM CIRCULAR AND DR. MOUAT'S CHARGES.

BY JAMES L. MAXWELL, M.A., M.D.EDIN. &c.

WHEN Dr. Mouat charged the anti-opium circular of December, 1891, with being "a most mendacious document," and was challenged to prove his assertion, it was but fair to expect that his proof would show a close and rigid dealing with the order and terms of the incriminated document. Such a process would have given his readers an opportunity of judging for themselves how far the charge of mendacity had been substantiated. Dr. Mouat's failure to take this simple plan is on the face of it unsatisfactory. The paper consisted of five brief paragraphs closely related to each other in the historical data and in the facts with which they dealt. To take here and there, not in the order of the document and away from their connexions, the few points which Dr. Mouat has dared to contest is not, I submit, a fair way in which to support a charge of mendacity. Neither can I allow that three of the four signatories are to be put out of court in discussing an Indian question because they happen to be medical missionaries who have practised in China, nor that the medical profession is itself an unfit tribunal to pronounce on the opium question. The opium question is not of yesterday. It has been before the public and before the profession for many years. Dr. Mouat seems to be quite unaware that the leaders of the profession pronounced very distinctly on the subject thirty or forty years ago, and with no hesitating voice, against his views. He also forgets, whilst denying to non-Indian practitioners the right to criticise Indian arrangements, that there would have been no Indian opium question to-day but for the fixed determination of the Indian Government to make a revenue out of Chinese vice. Of the 500,000 acres of land in British India now devoted to poppy cultivation, nine-tenths are to meet the export trade to China, the

Straits Settlements and Netherlands India, which is surely a very sufficient reason why outsiders should have something to say on the opium arrangements of India whether they concern other nations or the people of India itself.

The five points in the circular on which, so far as I can gather from his two most recent papers, the charge of mendacity is founded are these: (1) That opium cultivation is demoralising; (2) that it is perfectly possible to put down this cultivation in British India; (3) that the opium cultivation in India and the sale of the drug there are fostered for the sake of revenue; (4) that as the result of opium cultivation and of its free sale opium suicides in India are extremely common; and (5) that the evidence regarding Burmah tells very heavily against opium consumption.

1. "One opium cultivator demoralises a whole village." This sentence was quoted from the testimony of Mr. Sym, a gentleman who had spent eleven years in the opium district of Gorakhpur and who for eighteen months had charge of the East India Company's branch opium agency there. It will be well to enlarge the quotation: "Wherever opium is grown it is eaten, and the more it is grown the more it is eaten. This is one of the worst features of the opium question. We are demoralising our own subjects in India. One-half of the crime in the opium districts—murders, rapes and affrays—have their origin in opium eating." Dr. Mouat says that such evidence is worthless unless a particular village is named. Well, then, suppose we enlarge the view and take not a village but a great district, and instead of the testimony of an opium agent suppose we take that of a Presidency Governor and his Council. It had been proposed by the Indian Board of Revenue to introduce the cultivation of the poppy into Scinde. Here is the answer of the Bombay Governor and his Council:—"The Government consider there are very strong objections to the introduction of an industry so demoralising in its tendency as opium cultivation and manufacture into a province where at present it is unknown, and, as far as his Excellency in Council is aware, not asked for by the people. It has already been tried in Gujerat and the result was widespread corruption and demoralisation." The corruption and demoralisation referred to are in part due to the habit itself and in part to the amount of illicit sales by the growers. Free cultivation of opium up to about 1860 was the rule in Assam. What was the result? Just what Dr. Mouat admits—viz., such an amount of demoralisation that the people would not work and there was no land revenue. Infants, women and men alike used the drug and the degradation was extreme. That was the consequence of free cultivation, and though unquestionably the results are considerably modified under Government supervision it is surely idle to tell us that in the opium-growing districts, where the growers can eat opium as they please, the same evil influences do not exist.

In Rajputana there is probably more free cultivation than in British India, though even in the Native States the opium cultivation is largely under direction from Calcutta; and here are the conclusions of Dr. Valentine after thirty-one years of practice in India, a large portion of that time being in the service of a Rajput Prince, the Maharajah of Jeypore: "(1) That a large percentage of mortality amongst children is due to opium; (2) that a large percentage of crime is committed through the influence of opium; (3) that a large percentage of murder is due to opium poisoning; and (4) that a large percentage of the diseases a medical man is called upon to treat in dispensary, hospital and private practice is due to the habitual eating of opium." He adds: "Five-and-twenty years ago I made this matter a special study. In the central prison of Jeypore there were from 800 to 900 prisoners, more than three-fourths of whom used opium and quite one-half of them to excess. I had ample opportunities for studying its effects upon their moral and physical natures. Quite one-half of the violent forms of crime were committed under the effects of opium."

Dr. Mouat asserts on the authority of a friend that "none of the cultivators can sell any opium surreptitiously to the inhabitants of the villages, for they are too poor to purchase it. The alienation of any portion of the crop would be at once detected when the out-turn is weighed and paid for." But what say the leading authorities on opium in India on this point? In his first Bengal Administrative Report, Sir Richard Temple says: "The only drawback is the prevalence of smuggling in the districts where the poppy is grown. There is no doubt that the inhabitants in that quarter obtain much untaxed opium." Another Lieutenant-Governor of Bengal, Sir Cecil Beadon, says: "In the producing districts the facilities for the abstraction of opium made by the ryots themselves are so great that the Government hardly attempts to prevent it; what they do is to sell opium for consumption in these districts at a price a little above the prime cost." In February, 1891, Mr. Westmacott, the Commissioner for Excise, Bengal, writes:—"Every endeavour is made, though doubtless with only partial success, to prevent his [the ryot's] disposing of any portion of his crop except to Government," and in another place he speaks "of the illicit practices of our own cultivators." Will Dr. Mouat name any conditions more favourable to the growth of a wholesale system of deceit and dishonesty than those under which the opium cultivator in India works? The Government, in order to gain an enormous profit, is ready to make advances to the cultivator for the production of a drug, very small in bulk but very costly, which is to be sold either to China or in some other part of India. The price paid to the cultivator is the veriest trifle compared with the profits made by Government from its sale. Is it in the least degree wonderful that the ryots should desire to share these Government profits? If the lust of gain is so manifest in the paternal Government, may we not expect to see it reproduced in the people?

2. That it is perfectly possible to put down the cultivation of the poppy in British India we distinctly reaffirm. Dr. Mouat does not attempt to deny that in 1886–7 the area under poppy cultivation was 562,000 acres, and that in 1888–9 it was 459,000 acres. Neither does he attempt to suggest that any compensation was given to the ryots for the loss of their poppy culture over more than 100,000 acres. It suited the Government to do it and that was the only consideration. They have increased the acreage again since 1889 and for the same reason, that it suits the revenue. Dr. Mouat argues against the putting down of the whole 500,000 acres on the ground that the Government of India is a righteous Government and never does anything against the habits, religion and customs of its peoples. But surely he forgets that the same righteous Government did not think much of the habits and customs of the Assamese when, at one fell sweep, it cleansed the whole of Assam from the poppy growth, and he is perhaps not very willing to remember that the same Government continues to defy the religious feelings and habits of the Burmese in insisting on provision for the sale of opium in both Lower and Upper Burmah. The truth is that with regard to these 500,000 acres in British India it is not a question of Hindu beliefs and customs at all. Nine-tenths of the whole amount of opium obtained from these acres go to China and the Straits Settlements and the sole relation of the Hindu ryots to the cultivation is the small sum they gain by it and which they could gain with much more benefit to themselves in the long run by cultivating other crops. The real obstacle to the putting down of the cultivation in British India is not the 8000 chests required for internal consumption but the 90,000 chests to be sold to the Chinese.

3. That the opium cultivation in India is fostered for the sake of revenue no reasonable man will deny. It amounted to 5000 chests for export to China in the begining of the century, and it averages from 85,000 to 90,000 chests per annum now. This enormous increase has been developed for purposes of revenue and nothing else, and it has been developed in spite of the earnest remonstrances of the Chinese Government and the repeated protests of many persons in England since the period before the first China war. I need not waste further words on this point. But what about the sale of opium in India itself? Is that for the sake of revenue also, or does the Government of India "restrict the use of opium as far as may be accomplished by charging the maximum price that can be obtained without promoting smuggling in any form?" A nice question for casuists! The same Government which says concerning its neighbour, "Sell and spread this drug among the Chinese as far and as fast as possible," says (according to Dr. Mouat) to its officials regarding India, "Beware of danger and restrict within all reasonable bounds." Is it possible for the Indian Government to have two codes of morality—one for application to its dealings with China and another for its dealings with its own people? I confess to being very dubious of such a possibility. Frankly, I do not believe in it. But the Government of India cannot, even in matters of Excise, do just as it pleases with its own people. It has to keep an eye to England and to public opinion, and happily there has always been sufficient public opinion on this point to make caution necessary. But why argue the question? Is it not an admitted fact that for the sake of a revenue from Chinese

vice the Indian Government has for two or three generations increasingly exposed its own people to the contamination of that vice by the huge cultivation of the poppy in their midst? Dr. Mouat knows, or ought to know, that in all opium-producing districts Government opium is sold at *cost* price, and that, even so, little Government opium is sold, the cultivator supplying his own wants and selling illicitly to his neighbour also. Surely so far as those districts are concerned there can be no pretension for a moment that the Indian Government sets the interests of its people before its own money gains. If it did it would instantly cease to grow the poppy. Either we must accept the dictum that habitual opium-eating is so harmless a thing as to require no special restrictions or we must condemn the action of the Indian Government as cruel to its own people. As to the sale at a maximum price in districts where the opium is not grown, it is most unfortunate for the honour of the Government that this high price is coupled with another regulation, in the light of which the morality of the system *versus* the revenue derived from it must be judged. Why is it that all over India the opium licences are sold by auction or to the highest bidder? Why is it that in this way a premium is put on energetic sales? Does such a system mean morality or revenue? No, in spite of Dr. Mouat's attempt to minimise the importance of the quotation from Sir Cecil Beadon's evidence before the Committee of the House of Commons, I venture to repeat it in its naked frankness, only regretting that space does not permit to give it in full. Question: "And the Government would have been quite ready to see it consumed by their subjects as well as by the Chinese?" Answer: "I do not think the Government have ever regarded the subject in that point of view (the moral point of view), but only looked upon it in a fiscal point of view and endeavoured to get as much revenue out of it as they possibly could." As Lieutenant-Governor of Bengal and the head of the Opium Department Sir Cecil Beadon must have known what he said.

4. That, as the result of opium cultivation and of free sale, opium suicides in India are extremely common was a statement which we did not expect to be attacked. But Dr. Mouat points his sharpest sarcasm at it. Neither his friend, the opium agent whom he quotes, nor he himself had ever heard in India of an opium suicide. Not even in Calcutta, with a population of more than half a million, did he ever remember an opium inquest. Dr. Mouat is strong in negations. I must ask him to bear with me in suggesting that his favourite quotation, "the falsehood of extremes," applies here to himself. He might have thought that with such ready access to a deadly and a very easy poison there would be many instances of suicide amongst a heathen people, destitute of the self-control which Christian teaching gives, and liable to many breezes of passionate excitement, where opium would be at once a refuge and a revenge. In the sister heathen empire of China, it is not unreasonable to estimate, 100,000 souls do now actually in a single year take this opium leap into eternity, and it would be a very remarkable fact indeed if India should know nothing of opium suicides. But such is not the case. In the *Indian Medical Gazette* of June, 1891, there is a brief paper by Dr. M'Reddie, Civil Surgeon, Hardoi, entitled "Opium Suicides in the Hardoi District." In three years, in this limited district, out of 180 suicides 97 were from opium, and of these about 80 per cent. were women. "The poppy," says Dr. M'Reddie, "is largely cultivated, and hence opium readily comes to hand when self-destruction is contemplated. The question arises, Are opium suicides as common in other districts where the poppy is largely cultivated? ..... Of the 79 female suicides 14 were girls varying in age from fourteen to eighteen. ..... The causes of self-destruction seem invariably to be some petty quarrel which at the moment, in a people devoid of self-control, assumes such gigantic importance that life does not appear worth living." Dr. M'Reddie's question is a very pertinent one, "Are opium suicides as common in other districts where the poppy is largely cultivated?" I do not see how any thoughtful man can hesitate about what the answer would be if due inquiry were made, and in a country where death registration is from the constitution of society necessarily very imperfect we think it most unlikely that even Dr. M'Reddie's numbers at all come up to the actual reality. Again, whatever may have been the case in Dr. Mouat's time, opium inquests in Calcutta are anything but rare now. One newspaper correspondent, under date Oct. 29th, 1892, speaks of the coroner there as having "to hold inquests almost every day in connexion with opium poisoning." Another writes to the Calcutta *Statesman*: "Read the local columns of any newspaper and mark the increasing number of opium suicides. Is there any civilised country in the world in which the cause of an increasing number of crimes like this is left wholly unnoticed by the Government?" To quote again, the *Times of India*, certainly not an anti-opium paper, commenting on the large proportion of opium suicides in Bombay, says: "It is to be accounted for by the perfect freedom with which so-called 'licensed vendors' of these drugs (opium and arsenic) are able to supply persons intending to commit suicide. It can easily be conceived that if opium and arsenic could not be obtained so readily, and in the unlimited quantities in which they are now sold to all and sundry, many of the suicidal deaths now recorded would not have occurred. Why these two drugs have been excluded from the schedule of 'poisons,' and why they are allowed to be sold to anybody in any quantity is not apparent."

5. Dr. Mouat's lame attempt to discount Sir Charles Aitchison's sharp condemnation of our opium proceedings in Burmah, on the ground that he was only a statesman, will not help his cause. Unfortunately for him, Sir Charles Aitchison, of 1880, is backed up with even more emphasis by Sir Alexander Mackenzie, the Chief Commissioner of Burmah in 1891, and between the two dates anyone who cares to read the numerous testimonies from the various leading officials in Burmah in 1886, as they appear in the recent Opium Blue-book, will find ample evidence of at least one grave case in which our "righteous" Indian Government has defied the religious feelings and habits of a people in order to secure a revenue of something like £200,000 a year. Dr. Mouat twice quotes Sir Benjamin Brodie, and I leave him with a third quotation from the same high authority: "However valuable opium may be when employed as an article of medicine, it is impossible for anyone who is acquainted with the subject to doubt that the habitual use of it is productive of the most pernicious consequences, destroying the healthy action of the digestive organs, weakening the power of the mind as well as of the body and rendering the individual who indulges himself in it a worse than useless member of society. I cannot but regard those who promote the use of opium as an article of luxury as inflicting a most serious injury on the human race."

Highbury-park, N.

THREE CASES OF PUERPERAL ECLAMPSIA.

BY JOHN MARRIOTT, M.B. LOND.

PERHAPS the following three cases of puerperal eclampsia may be found of some interest in connexion with the question of treatment, which always demands such anxious consideration and prompt application. So far as these instances go it would appear that, for the mother at any rate, the immediate induction and rapid completion of labour afford at once the safest and most ready means of relief from a most precarious condition.

CASE 1.—On June 2nd, 1890, I was called early to see Mrs. ——, aged thirty-nine, at term with her eleventh child. She was stout and plethoric. I was told that she had had ten violent fits during the night and had not spoken for hours. She had been washing all the previous day and had only complained of some tingling sensation in both hands. I found her in deep coma and the tongue badly bitten. Cyanosis was extreme and she breathed with difficulty. The pulse was feeble and intermittent. Urine drawn by catheter proved to be highly albuminous. There was no sign of commencing labour. As she immediately afterwards had two more fits and was evidently in a desperate condition I proceeded to attempt delivery. The os was fortunately soft and yielded to digital dilatation, so that in about twenty minutes I was able to turn and in about another quarter of an hour both child and placenta had been expelled. The patient flooded violently and, unfortunately, I had no ergotine with me and she could not swallow. The hæmorrhage was arrested by hot water injection. The child did well. The mother lay in deep coma for several hours, but had no more fits, and when she came round asked for food and said she felt quite well. She recovered without a bad symptom and after a few days the urine was found to contain no trace of albumen. She has remained in good health ever since, earning her living as a washerwoman.

CASE 2.—On August 29th, 1891, I was sent for to see

H. W—— aged twenty-one, and heard that she had had five fits in two hours. She had been ailing for some weeks, being anæmic and suffering from dyspnœa, but her condition was not suspected. I found her unconscious, with a portion of the tongue bitten clean out. Finding the vulva œdematous and the legs slightly so, I drew off the urine and found it nearly solid with albumen. She appeared to be about four months pregnant and the fœtal movements were perceptible. Soon afterwards she had another fit, during which respiration ceased and was with difficulty re-established. I placed two drops of croton oil on the tongue and administered a little chloroform, proceeding then to dilate the os with the finger. The cervix was of course long and very rigid, but in nearly an hour I succeeded in introducing six laminaria tents. After this she had no more convulsions, but came round sufficiently to take a full dose of chloral. The oil acted vigorously and labour pains came on regularly. When the tents had been in twelve hours I removed them and the fœtus immediately followed. There was no difficulty with the placenta and no hæmorrhage. She had complained much of headache and giddiness for the last two hours, but was quite conscious. About ten minutes after the birth of the fœtus she was suddenly seized with violent dyspnœa, which lasted about a quarter of an hour. There were no abnormal physical signs to be discovered in the thorax. She had several of these attacks during the next few days, but less severe. They seemed to be uræmic in nature. The urine continued albuminous and she had bad headache for some time. She also developed a rough systolic murmur at the left apex, evidently caused by dilatation of the ventricle as the apex became displaced downwards and outwards. The pulse showed increased tension and the œdema of the vulva and legs remained stationary for quite a fortnight, after which it slowly declined. The endocardial murmur slowly disappeared, and the albumen decreased *pari passu* with the general improvement, so that by the middle of October she was able to go into the country convalescent. In view of the persistency of the renal symptoms in this case, it seems improbable that she would have survived if there had been no interference with the course of gestation.

CASE 3.—On Oct. 3rd, 1891, I was asked to visit Mrs. ——, who was said to be in convulsions. The patient was an extremely pale, thin woman aged thirty-eight, of a phthisical family and never enjoying good health. She had borne ten children and subsequently had had two miscarriages, flooding dangerously on each occasion. The last living child was born four years ago. She was now expecting her eleventh confinement and had been in better health than usual for the last few days. On the morning of Oct. 3rd she rose at 6.30 and went downstairs. Whilst engaged in preparing breakfast she suddenly fell to the ground in a fit and soon afterwards had three more without regaining consciousness. I found her to be quite blind and only feebly conscious on my arrival at 8.30. She made some attempt to speak, but was incoherent and groaned often as if in pain. She also resisted being moved or touched. Almost immediately she had another fit, which began with conjugate deviation of the head and eyes to the left and complete arrest of respiration, the whole body becoming perfectly rigid. In about fifteen seconds violent clonic spasms succeeded, affecting the whole body simultaneously. These continued with unabated strength for about forty-five seconds and then suddenly ceased. Breathing was extremly shallow and sighing and the patient much cyanosed. From this point she gave no sign of consciousness and could not be roused. I found the urine highly albuminous and so at once commenced digital dilatation of the os. Being constantly interrupted by fits I gave a small quantity of chloroform at intervals in the hope of moderating their violence, but it did not appear to have much effect. I found the os very rigid, as it had not been fully dilated for four years. Consequently I was only able to get it to admit three fingers and to rupture the membranes. I then left her for a time, hoping that dilatation would proceed naturally. On returning three hours later I found that no progress had been made. She had had numerous fits and was obviously in a critical condition, the breathing being of marked Cheyne-Stokes type, the pulse imperceptible at the wrist, extremities cold and the larynx much obstructed with mucus, which she made no effort to dislodge. There had been no return of consciousness. As a last resource I attempted to apply the forceps through the half-dilated os, and on getting them fixed injected hypodermically a full dose of ergotinin and a minim of liquor strychninæ. Fortunately the fœtus, though near term, was very small and was extracted in a few minutes. The patient's condition was so critical that I was obliged, just before the birth of the child, to inject two syringefuls of brandy under the skin of the abdomen. I waited nearly half an hour before attempting to remove the placenta, knowing the patient's tendency to flood, but the uterus contracted firmly and gave no trouble whatever. She had two more convulsions between the delivery of the fœtus and placenta, but it was remarkable that they were not so severe as those preceding, and after the expulsion of the placenta there was absolutely no recurrence. She remained unconscious for about eight hours, but swallowed small quantities of brandy and milk when poured into the back of the throat. Later she seemed to fall into a natural sleep, and on waking up said she felt quite well and wondered to see people sitting up with her. Suppuration followed in the track of the injections of brandy, but not in that of the ergotinin. Probably the tissues were suffering in consequence of the uræmic state of the blood. She made an excellent recovery, but the fœtus was dead. A week after delivery there was no trace of albumen in the urine, but the urea was deficient, being only 0·7 per cent.

Abington-street, Northampton.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum propriας collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

HOSPITAL FOR SICK CHILDREN, GREAT ORMOND STREET, LONDON.

TWO CASES OF SEPARATION OF THE LOWER EPIPHYSIS OF THE FEMUR ASSOCIATED WITH TUBERCULOUS DISEASE OF THE KNEE-JOINT.

(Under the care of Mr. EDMUND OWEN.)

WHETHER the tuberculous disease began in the epiphysial lines of the bones in these cases or spread to the bones from the joints, the extent of the disease as revealed at the amputations is very unusual. We do not recollect to have met with any similar case of separation of the lower epiphyses of the femur by tuberculous disease either in hospital practice or as described in surgical literature. The great extent of the mischief in each case undoubtedly justified the removal of the limbs. No treatment short of this, with the subsequent clearing out of the bones, could have sufficed to get rid of the disease; and had it been possible to diagnose the extent of the bone implicated, permission to amputate would, no doubt, have been obtained at the time of the first operation. For the notes of these cases we are indebted to Mr. F. Wagstaff, surgical registrar.

CASE 1.—R. B——, aged six years and a half, struck her knee in a fall two years and a half ago. As she soon began to limp and complain of pain, she was taken as an out-patient to a hospital, where for eight months she was treated with splints. But she did not make much progress. Last May her mother asked for her admission into the Children's Hospital. Her left knee was then much flexed and swollen and there was a baggy feeling in the upper pouch of the synovial membrane. The tibia was drawn backwards and rotated outwards, but by the patient use of a stirrup and a 3 lb. weight the limb became almost straight; so the child was sent home in August wearing a Thomas's knee-splint. She came back, however, towards the end of September as bad as or worse than ever. The reapplication of extension, however, did her deformed knee no good, and the skin was found intolerant of any pressure. On Nov. 23rd Mr. Owen proceeded to resect the joint through an anterior crescentic incision. The articular surfaces were extensively ulcerated and the lower epiphysis of the femur was found to be separated from the diaphysis, the junction-cartilage being completely disorganised and the medullary canal full of semi-purulent material. A long Volckmann's spoon was introduced into the shell of the femur up to the level of the hip-joint, and by it the tubercular

débris of the marrow was scraped out, the cavity being stuffed with gauze. As permission had not been obtained for further treatment, the wound was temporarily closed. Mr. Morgan and Mr. Pitts saw the child with Mr. Owen, and it was agreed that amputation was inevitable. This was performed through the lower third of the thigh (Nov. 30th), the great trochanter being trephined and a long drainage-tube passed down the shell of the femur and out between the flaps. The child did well.

CASE 2.—H. B——, aged three years and eleven months, was admitted on Nov. 25th. Until fifteen months ago he was quite healthy, but he then began to limp, and the left knee was found to be stiff and swollen. His medical attendant applied a splint, and shortly afterwards got him admitted into this hospital. For a month before Nov. 25th he had been lying in bed at home. His nights had been disturbed by "startings" in the limb. The knee was semi-flexed, swollen and tender; the head of the tibia was displaced backwards, and there was a definite fluctuation in the sub-crural pouch of the synovial membrane. Mr. Morgan saw the case with Mr. Owen, and it was agreed that the disease was so far advanced that resection was the proper course to adopt. On Dec. 7th, therefore, a horseshoe incision was made into the joint and the patella raised. The intrinsic ligaments and the synovial membrane were represented by pulpy granulation tissue, and the neighbouring parts of the femur and tibia were soft and ulcerated. Further examination showed that the lower epiphysis of the femur was practically detached from the diaphysis, and that the femur was represented by a thin shell of bone filled with a semi-fluid tubercular marrow. In these circumstances it was deemed useless to go on with resection; and as permission had not been obtained for amputation the wound was closed. With the parents' approval amputation was performed a few hours later, the femur being thoroughly scraped out by a slender scoop, which was found to reach almost as high as the hip-joint. Dry dressings were applied and the child did well.

Remarks by Mr. EDMUND OWEN.—Disease of the knee-joint is one of the commonest of the more serious of the tuberculous lesions of childhood, but, so far as my experience goes, it is rarely associated with separation of the femoral epiphysis. It is many years since I met with a case of that nature and it is strange that at the present time I should have two instances of it in my ward simultaneously. Separation of the *upper* epiphysis in the course of tuberculous disease of the hip is by no means rarely met with, as the × junction-cartilage is within the hip-joint; but in the case of the lower one it is not within the knee-joint. On examination of the specimens after amputation we formed the opinion that the disease began in the joint and not in the junction-cartilage, and this chiefly for the reason that the changes effected there had evidently needed a longer time. This conclusion may possibly be incorrect; at any rate, it is not dogmatically offered. It may well be that the lesions began separately, though they were ultimately connected with each other. In the case of each child it was particularly noted before operating that the sub-crural pouch of the synovial membrane was extensively implicated. May it be that tuberculous disease lurking in that part of the joint is specially likely to invade the junction-cartilage? If so, it affords an additional argument for advising early arthrectomy or resection in this form of joint-disease. For my own part, I am in constant dread lest I grow into a too zealous resector of knee-joints; but I notice that when in an indefinite case I ask the advice and sanction of my colleagues, Mr. Morgan and Mr. Pitts, they almost invariably acquiesce in my proposal to open the joint. Thus I assure myself that I am not going too fast; that my watch, as it were, is keeping time with the standards of Charing-cross and St. Thomas's Hospitals. Lastly, would anyone be inclined to suggest, I wonder, that the amputation of the thighs of these unfortunate children was a needlessly severe measure? I myself tried to adopt that conclusion, but I failed to find any alternative course. It would not have answered, I think, to saw off the lower surface of the epiphysis (as in a resection) and to leave its upper part against the femoral shell, for, the junction-cartilage having melted away, there seemed to be no likelihood of the remaining part of the epiphysis obtaining an attachment above; and, as I have already said, in each case the femur was but a thin layer of bone. Moreover, as the junction-cartilages had completely disappeared, there was nothing left to provide for the subsequent addition of length to the limb—for the lower femoral epiphysis is far and away the most important element of its skeleton in this respect. Altogether these two cases appear to me to possess very considerable interest. I regret, however, that I am unable to draw any practical deductions from them.

YORK-ROAD GENERAL LYING-IN HOSPITAL.

A CASE OF TRACHEOTOMY IN AN INFANT THREE DAYS OLD.

(Under the care of Dr. CULLINGWORTH.)

THE following case is of interest, first, on account of the rarity of the malformation; and, secondly, because the patient is perhaps the youngest on whom the operation of tracheotomy has been performed. Parker,[1] in his work on "Diphtheria," mentions as the youngest patient a child six weeks old, successfully operated on by Scoutetten for croup. We have no data from which to draw conclusions with regard to the prognosis in cases similar to that which we publish below. The question of the influence of age on prognosis after tracheotomy for diphtheria and allied conditions is, however, worth considering. Drs. Lovett and Munro,[2] in their paper on the consideration of the results in 327 cases of tracheotomy, write: "The age of the patient is, of course, an important consideration; the mortality rate falls as the age increases up to eight or ten years. In 1600 cases collected from Cohen, Schuller, Birnbaum, Martin &c., and tabulated with regard to the age of the patients, the recovery-rate in children less than two years old was 20 per cent., rising steadily until the age of eight years was reached, when it was 40 per cent. The 327 cases reported here followed much the same course, except in the youngest children, where the operation proved much more fatal. Of 42 patients under the age of two years only 3 recovered—one eleven months old and two fifteen months old, all nursing children." At the end of their paper they give an enumeration of all the series of cases of tracheotomy which they could find in medical literature throughout the world—a total of 21,853, with a percentage of deaths amounting to 28. For the notes we are indebted to Mr. Walter W. Heelas, house physician.

The present case was an infant (female) born in this hospital on Nov. 7th, well nourished, and weighing 6 lb. 6 oz. The lower jaw was markedly receding and ill-developed, giving to the face the appearance of being "overhung." The tongue was very short, and there was a large cleft in the palate. The infant was cyanosed from birth and had recurrent attacks of inspiratory dyspnœa with great increase of cyanosis. These exacerbations usually passed off in a few minutes. On the evening of the 10th (eighty-three hours after birth) the condition suddenly became worse, with great lividity of lips, cold extremities and general collapse. The short tongue was with difficulty drawn forwards, but without giving relief, and an unsuccessful attempt was made to pass a catheter into the air passage. The patient was evidently dying, and tracheotomy—as the only possible means of saving life—was decided upon. With the assistance of Dr. Tate, who also administered chloroform, Mr. Heelas proceeded with the operation, which was completed without any serious difficulty. The cricoid could easily be made out beneath the skin. The opening in the trachea was made below the isthmus and the smallest-sized india-rubber tube, cut short, was provisionally inserted. The breathing immediately became quiet, regular and normal, the natural colour returning to the lips. The child slept well the same night and took nourishment fairly well; but, the cleft palate preventing suction, it had to be fed by a spoon on peptonised cow's milk. On the 14th a Parker's No. 1 silver tube was substituted; there was no difficulty in its introduction and it gave rise to no irritation. The wound healed well. Respiration through the natural passage was attempted every day by closing the wound with the finger; it was found that the child could easily expire and cry out, but failed completely in inspiration. The patient continued to do well till Dec. 2nd, when it was seized with convulsions and vomiting, became rapidly worse, and died on the 3rd—viz., the twenty-third day after operation. With one exception (on Nov. 14th, when there was slight blood-stained mucus owing to there being a little difficulty in reintroducing the tube after it had been left out for some time) there had not been any sign of

[1] The Nature and Treatment of Diphtheria, p. 74.
[2] American Journal of the Medical Sciences, No. 94, p. 167. 1887.

tracheal irritation caused by the tube, nor was there ever any serious embarrassment in breathing.

At the necropsy, made twenty-six hours after death, on opening the thorax about three ounces of pus were found in the right pleural cavity and there was slight consolidation of the lung on this side. The trachea was healthy, with the exception of a small spot opposite the situation of the lower end of the tube, where there was a quite superficial erosion. The tongue was very short, but broad and thick; and it was noticed that, by falling back on the epiglottis, the obstruction to the passage of air would probably have been easily produced.

Remarks by Mr. HEELAS.—In this case the operation was performed for a mechanical obstruction to the breathing, which was considered to be caused by the short malformed tongue falling back on the epiglottis and thus closing the upper aperture of the larynx. By means of careful nursing the child lived for twenty-three days, during which time the general health was good up to twenty-four hours before death, when symptoms of pneumonia developed. This complication was regrettable, as there was good reason to hope that as the parts developed the condition which necessitated the operation might have passed off.

NEWCASTLE-ON-TYNE ROYAL INFIRMARY.

A CASE OF LUMBAR NEPHRECTOMY FOR CALCULOUS KIDNEY, AND ONE OF ABDOMINAL NEPHRECTOMY FOR SARCOMA; RECOVERY.

(Under the care of DR. G. H. HUME.)

THE numerous cavities of the kidney in Case 1 contained each either calculi or soft calculous matter and pus. It is obvious that nephrotomy and drainage would have done nothing towards effecting a cure. The only feasible measure was nephrectomy, even though this was carried out in some uncertainty as to the working power of the other kidney. The normal state and quantity of the urine, save for the presence of pus, were evidence in favour of the latter being functionally competent. The polyuria following the operation indicates undoubtedly the strain thrown upon the remaining organ and points to increased blood pressure and some degree of vascular congestion. In Case 2 the absence of symptoms was a striking feature. Hæmaturia, which is said to occur in only about one-half the number of cases of malignant renal tumour, was probably prevented by early blocking of the ureter; and to the same cause was due the absence of other alterations of the urine. The freedom from previous exhausting loss of blood was a fortunate circumstance, influencing materially the chances of recovery. In the performance of the operation the incisions made gave ample room and rendered comparatively easy the detachment of the tumour. With regard to the nature of the growth it proved to be a large, round-celled sarcoma. It grew from the upper part of the concave border, so that unaltered kidney was expanded over the posterior aspect of the tumour. The account of these cases is taken from notes by Mr. W. Martin, house surgeon.

CASE 1. *Calculous kidney; lumbar nephrectomy.*—A moulder aged forty-three was admitted on Sept. 8th, 1892, complaining of pain in the back. Three years ago he had first felt this pain, which was brought on especially by movement and stooping. He had attacks, often very severe in character and lasting from a day to a month, and these attacks have been repeated down to the present time. His urine has contained a deposit of a milky colour, increasing gradually in amount. During the last twelve months his health has broken down and he has lost two stones in weight. The only important point in his previous medical history is that he was operated upon for stone in childhood. His appearance on admission was that of a feeble, anxious-looking man, who walked with stiffened gait as if in pain. He was 5 ft. 4 in. in height and weighed 6 st. 11 lb. His pulse was feeble, his temperature normal. On examining his abdomen a rounded, firm tumour about the size of a cocoanut could be felt projecting under the ribs on the left side. Below, its margin was well defined; above, the mass disappeared underneath the ribs. The swelling was dull on percussion and the dulness extended laterally and behind as high as the angle of the scapula. The mass was fixed, or moved only very slightly during forced respiration. It was tender on firm pressure. The lumbar sounds were clear. The urine was of normal quantity and composition, save that it contained a large amount of pus. During his stay in the hospital rest and treatment relieved his suffering, but he steadily lost flesh at the rate of 2 lb. to 3 lb. a week.

On Sept. 26th, the presence of pus having been previously demonstrated by the hypodermic needle, the kidney was cut into by lumbar incision. A large quantity of fetid pus was evacuated, and the finger passed into the kidney found calculi and calculous matter in different cavities. It was then determined to remove the kidney and the first incision was extended towards the linea semilunaris and for a couple of inches downwards along the outer border of the rectus. In this way ample space was provided. With the finger the tumour was gradually separated from the thickened and adherent peritoneum, and as the separation went on it had to be forcibly dragged down from under cover of the ribs. The thickened pedicle, containing artery and vein, was transfixed and tied; the dilated ureter was secured into the wound. In trimming away some of the thickened tissue in front an opening was accidentally made into the peritoneal cavity. This was closed by drawing forward the edges and tying a ligature round, instead of suturing. The operation was completed by suturing the wound and placing two drainage-tubes, one in the upper and the other in the lower pouch of the large cavity. During the afternoon following the operation twelve ounces of urine were passed. The evening temperature was 103° F., the pulse 120. The patient was not markedly collapsed. Next day the temperature fell to normal and the subsequent recovery was steady. The patient was discharged in good health at the beginning of November. During convalescence one point with regard to the quantity of urine passed was noteworthy. Before operation the average daily quantity had been forty to fifty ounces; after operation there was a gradual increase, reaching ninety ounces on the sixteenth day, and up to the time of discharge the quantity continued abnormally large; it contained a trace of albumen.

CASE 2. *Sarcoma of kidney; abdominal nephrectomy.*—A clothier aged forty-one was admitted on Oct. 28th, 1892. He stated that for a year he had been losing weight, but did not feel ill. Three months ago he first had pain in the left side, which shot across the body and down to the hip-bone, but it was not severe. A swelling in the left side was detected by his medical man a few weeks before admission. He was a thin unhealthy looking man, with acne rosacea on the face. In the abdomen a tumour, the size of a fœtal head, could be felt under the left costal margin. It was nodular and hard, with an irregular outline, well defined below and passing under the ribs above. On respiration the tumour moved to the extent of an inch and a half. On percussion a broad tympanitic area was found over the front; the lumbar sounds were dull. The urine was acid, sp. gr. 1023, light in colour and contained no blood or sediment; there was no albumen or sugar.

On Oct. 31st an incision about six inches long was made from the margin of the ribs in the linea semilunaris. The abdomen was opened and the tumour found to be in the left kidney. A lumbar incision was then made from the middle of the first cut, dividing all the structures forming the abdominal wall, including the peritoneum. The intestines were pushed towards the right and protected with sponges. The peritoneum covering the kidney was then separated until the whole growth was exposed. The separation was first carried out anteriorly to nearly the position of the pedicle; then, the lower end being detached, the tumour could be lifted out of its bed and drawn down. The freeing of the upper part was facilitated by a broad retractor passed under and raising the ribs. The vessels forming the pedicle were in part directly ligatured, in part clamped and afterwards tied. No bleeding of any moment took place. The large cavity left was packed with sublimate gauze dusted with iodoform, the ends of the strips being brought out through an opening made specially for drainage in the most dependent part of the loin. The whole extent of the wound was closed layer by layer with silk sutures, the skin being finally brought together with silkworm gut. Thirty-six hours after the operation the gauze was removed and a drainage-tube inserted through the opening. For some days after the operation the patient had slight diarrhœa, and probably from some fouling of the dressing, the lower part of the wound suppurated and there was a rise of temperature. From the same cause it was difficult to measure the quantity

of urine or estimate the amount of urea. At the end of a week the quantity passed in one day was forty-two ounces and contained 463·68 grains of urea. Except for the slight suppuration recovery was in all respects satisfactory, and the patient left the hospital in good health on Nov. 29th.

Medical Societies.

EPIDEMIOLOGICAL SOCIETY.—A meeting of this Society was held on Jan. 18th, Dr. J. F. Payne, President, in the chair.—Dr. KENNETH M'LEOD read a paper on a remarkable Epidemic of Dropsy which prevailed in Calcutta in the cold season of 1877–78, 1878–79 and 1879–80; in Dacca, Millong and other places in Assam, Sylhet and Cachar in the cold season of 1878–79; and in the island of Mauritius from November, 1878, to June, 1879. The facts of this singular outbreak had never been brought together systematically, and there existed differences of opinion regarding the nature, causation and identification of the disease amongst those who had studied the subject. After describing the topography and climate of Calcutta, Millong and Mauritius, and relating the incidents of the epidemic in each place, Dr. M'Leod gave a careful summary and elaborate analysis of the symptoms as recorded by competent physicians and observed by himself. The epidemiology of the disease was then systematically discussed under the heads of: (1) The subject; (2) the environment; and (3) the origin and diffusion of the epidemic. The principal conclusions drawn from a detailed study of all the circumstances—topical, climatic, hygienic, personal and epidemiological—were: (1) That the disease was not due to cold and damp, malaria, poverty or starvation, food or water, hygienic defects, anæmia, scurvy, or any other constitutional depravity; (2) that it presented the facies of an epidemic rather than of an endemic; (3) that the cause of the outbreak in Calcutta was obscure, but the probability of its conveyance from Calcutta to the other localities affected was strong; (4) that diffusion took place principally amongst persons associated in families, castes, occupation, villages &c.; (5) that the evidence in favour of communicability was considerable, and that human agency and intercourse offered the most reasonable solution of its epidemic diffusion; (6) that the diffusibility of the disease was weak and slow, and subject to the influence of seasonal and other conditions; and (7) that the mortality was also greatly influenced by hygienic and personal conditions. After quoting the opinions recorded by Drs. Chevers, Fayrer, Moore, Davidson, Cornish, and others who had studied the disease, Dr. M'Leod contended that its symptoms and phenomena did not accord with those of beri-beri—a term which had evidently been applied to a variety of diseased conditions, differing in pathology and etiology, and agreeing only in the presence of dropsy and paralysis. He suggested that the disease now described should be designated simply "epidemic dropsy," and he defined it as "a specific disease characterised by the sudden appearance of anasarca, preceded in most cases by fever, vomiting, diarrhœa or irritation of the skin; often accompanied by a rash, by fever of a mild, remittent type and disorder of the bowels." The urine varies in quantity, colour and frequency, is very rarely albuminous and is never suppressed. Deep-seated pains in the limbs and dyspnœa are very common. Anæmia, which is apt to be progressive, is a prominent and constant feature of the disease. Œdema of the lungs and distension of the pleuræ and pericardium frequently occur in the later stages. The attack lasts from three to six weeks. The mortality varies from 2 to 40 per cent., according to circumstances. Death is usually caused by lung and heart complications, and is sometimes early and sudden. The disease is communicable from person to person and portable by human agency and intercourse, but its diffusion is feeble and depends on seasonal and other conditions which modify its epidemic vitality and restrict its extension and transmission.—Sir W. Moore, Dr. Manson and the President took part in the discussion. Dr. MANSON, who had seen many cases of the disease, maintained that its occurrence in the cool season only, the presence of anasarca, and above all the absence of peripheral neuritis, sufficiently distinguished it from beri-beri, and Dr. PAYNE saw no reason to doubt its malarial or telluric origin.

HARVEIAN SOCIETY OF LONDON.—A meeting of this Society was held on Jan. 5th, Mr. Bryant, Vice-President, in the chair.—Mr. J. JACKSON CLARKE showed specimens illustrating Intestinal Obstruction—namely, Congenital Obliteration of the Small Intestine; a large Submucous Lipoma of the Ascending Colon; a Volvulus of the Sigmoid Flexure; and a case of Extensive Ulceration of the whole of the Large Intestine.—Mr. HARRISON CRIPPS opened the discussion on Obstruction of the Large Intestine and its Treatment by Temporary Typhlotomy. He maintained that unless the obstruction can be felt in the rectum, or some definite tumour be discovered in the abdomen, its exact site in the large gut cannot be determined. In the first instance careful injections were advised, with the view to the possible washing away of an obstructing plug. If these failed to give relief, abdominal section was advocated, Mr. Cripps recommending that in the first instance the incision should be made in the left inguinal region between the umbilicus and the anterior superior spine, and giving reasons for the selection of this spot. He gave the details of two cases in which he had found after making the abdominal incision on the left side that the sigmoid and descending colon were empty and collapsed. In each of these cases he closed the wound and opened the abdominal cavity on the right side over the cæcum. The parietal peritoneum was carefully stitched to the portion of the bowel in such a way that only a circular portion of the cæcum no bigger than a sixpenny piece was exposed. Through this an opening was made which gave immediate relief to a large quantity of air and liquid fæces. In both cases after nine and thirteen days respectively the motions commenced to pass in the natural way and in both the cæcal fistula was subsequently closed. This temporary typhlotomy was advocated in all cases where the obstruction proved to be above the descending colon, and it was moreover advised that the opening in the cæcum should in the first instance be quite small, so that it might be easily closed should the obstruction subsequently give way, and the motions pass by the right passage.—Mr. GREIG-SMITH preferred incision in the middle line, as it was quite possible to bring either the sigmoid or the cæcum into the wound. As time was of importance in these operations it was undesirable to make two separate openings in the abdomen. He had also performed median colotomy of the transverse colon and liked the operation very much. He never stitched the bowel to the skin, but preferred to stitch it to strips of sticking-plaster and to pass a skewer beneath it.—Mr. TREVES spoke first of difficulties in diagnosis between obstruction in the large and small intestine. In his experience there was tenderness on pressure in impacted fæces, but not in malignant disease; moreover, in fæcal impaction there were often symptoms of poisoning by sulphuretted hydrogen. With regard to the use of the long tube in cases of obstruction of the large bowel, he was sure that no tube could be passed beyond the sigmoid flexure. He had tried one hundred times on the dead body without success. He was inclined to agree with Mr. Greig-Smith in preferring a median opening.—Mr. SHEILD thought that the administration of anæsthetics, especially ether, in cases of obstruction was fraught with danger. Should an anæsthetic be necessary he would use fresh A.C.E. mixture with plenty of air.—Dr. SIDNEY PHILLIPS said that peritonitis might extend from a case of rectal cancer and produce obstruction of the small intestine.—Mr. LOCKWOOD had seen extrusion of bowel take place through the abdominal incision; he therefore used a large number of sutures to fix the gut and close the wound in the abdominal wall.—Mr. ALLINGHAM had found the intestine insensitive to incision, whereas cutting the mesentery caused pain.—Mr. BRYANT said that ballooning of the rectum was a variable symptom, but was constant in cases of stricture.—In reply, Mr. CRIPPS said that the explanation of ballooning was very simple. In cases of stricture there was very often leakage of a small quantity of discharge into the bowel below and patients retained their flatus to avoid escape of discharge, thus blowing up the rectum. He had only met with air in the peritoneum after puncture of the intestine. He thought that with a median incision there would be much difficulty in bringing the cæcum or sigmoid to the skin.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—A meeting of this Society was held on Jan. 16th, Mr. Shirley Murphy, President, in the chair. A paper was read from Mr. De'Ath of Buckingham on Health Missioners in Rural Districts. The Bucks County Council had devoted a portion of the sum at their disposal for technical education to the support of a scheme for the diffusion of sounder knowledge of matters affecting the health of the family and the home amongst the

rural population. Courses of instruction were given by rural medical officers of health, selected by the Council, to ladies, who, when certified after examination by a medical officer of health from another county, were sent out as missioners to districts, each comprising several villages, to instruct the mothers and young women of the agricultural and labouring classes by house-to-house visits and simple addresses in schoolrooms &c.—In the discussion that followed Dr. SYKES saw no reason why the scheme should not be extended to the towns where such knowledge was as much needed as in the country, and Dr. GIBBON referred to the efforts of the National Society in a like direction. The education of the rising generation was, however, deemed to be still more likely to yield lasting fruit, and it was resolved that an appeal be made to the Education Department to make the laws of health a compulsory subject in the higher standards of all public elementary schools.—Dr. THRESH then read a paper on the questions, What constitutes an Available Supply of Wholesome Water? and, What is "a reasonable distance" under the Public Health (Water) Act, 1878? In this country gravelly sites were, where available, preferred for building on account of the facility with which water could be obtained from shallow wells, but such wells sooner or later became polluted. In some places, however, on deep clays water could not possibly be reached except at a cost far exceeding the statutory limit to which the authorities could compel an owner to go; indeed, in his district much greater sums had often been expended by the authorities in fruitless experimental borings. In such cases the people were dependent on rain water, ponds or streams, but they were becoming rightly dissatisfied with such inferior supplies, as also with such distances as a quarter of a mile, which some magistrates considered "reasonable." In many places, if the Act were enforced, new houses could not be built and the old ones were allowed to remain, however dilapidated. He placed little reliance on his analyses, insisting rather on the surroundings and possibilities of pollution in the future.—Dr. WILLOUGHBY maintained that the duty of providing public water-supplies, where local sources were not available, should be, as in Italy, made incumbent on the County Councils, with their ample borrowing powers, and referred to the case of the population on the belt of Gault clay along the northern foot of the Wiltshire downs, who were dependent on brooks, *alias* ditches, with a reservoir of splendid chalk water within view which might be laid on by simple gravitation but was used solely for feeding a canal.

Reviews and Notices of Books.

Report on Leprosy and the Trinidad Leper Asylum for 1891. By W. V. M. KOCH, M.B., M.Ch. Government Press, Trinidad.

MUCH of this report by Dr. W. V. M. Koch, who has been in medical charge of the Trinidad Leper Asylum during the absence of Dr. Beaven Rake with the Leprosy Commission in India, refers to matters of detail which, though not without interest at Trinidad, are not likely to attract the general reader. It is curious to read amongst these matters of local interest that it was only in 1891 that the authorities at Trinidad placed a man at the gate of the asylum to do porter's work there. Before that date this duty was performed by a woman!

The plan by which "nightsoil and rubbish" are got rid of at the asylum is a very good one. On two platforms made of concrete and walled in with the same material on three sides, and roofed with metal, the nightsoil and rubbish, well mixed with charcoal and ashes, are laid on a bed of dry twigs and burned. The "powdery ashes" which result from this process are used by the patients in the asylum as manure for their gardens.

The admissions of patients to the asylum during the year (1891) numbered forty-four—thirty-six men and eight women. This, it is stated, is "about the average number of admissions." We are therefore entitled to conclude that there is no diminution of the number of lepers in Trinidad. It is remarkable that 43·18 per cent. of the lepers admitted to the asylum during 1891 were natives of India. Many immigrants arrive in Trinidad from India seeking employment; and it is from these that, as we see from the above statement, there comes a very large percentage of the leper population of Trinidad. It must not, however, be forgotten that the probabilities are greatly in favour of the belief that these immigrants acquire leprosy after their arrival in Trinidad. They are not lepers when they reach the island. With remarkably few exceptions, according to the statement in the Report, these immigrants do not show symptoms of leprosy until after the expiration of five years from the date of their arrival. This fact is easily ascertained, because they are brought to Trinidad under indenture, which lasts for five years. From the time they leave India and before they are allowed to begin work at Trinidad they "have to undergo repeated medical examinations at the hands of four medical men." Therefore, taking all the facts into consideration, it is certain that leprosy first attacks the immigrants during the time in which they work under indenture in Trinidad.

A considerable portion of the Report is devoted to a record of cases of leprosy which were treated by means of tuberculin. This drug, as we know, is as useless in the treatment of leprosy as any other of the numerous remedies which have been tried in connexion with that disease. To this conclusion Dr. W. Koch has also come. There are a good many tables at the end of the Report, and one of them, on page 23, is headed "Report of Discharges for 1891." There is in this table some very suggestive reading for those who believe that leprosy is a communicable disease. Here are some examples:—"A woman, aged forty-six, suffering from anæsthetic leprosy, was discharged from the asylum after nearly three months' residence there for the following reason: 'Wanted to return to her husband and children.'" A man of sixty-nine years of age, who had anæsthetic leprosy, "went out on leave and did not return. Subsequently it was ascertained that he went to Arima to work on a cocoa estate." This kind of experiment touching the possibility of the diffusion of leprosy by allowing lepers to mix freely with healthy people ought, if properly watched, to give material evidence bearing on the settlement of the question of the communicability of leprosy.

The Diseases and Deformities of the Fœtus: an Attempt towards a System of Ante-Natal Pathology. By J. W. BALLANTYNE, M.D. With Plates and other Illustrations. Vol. I. Edinburgh: Oliver and Boyd.

THERE can be no doubt that, as the author says in his introductory chapter, the subject of fœtal pathology is one concerning which there is a real absence of knowledge and a real need for thorough research. The study is one presenting many innate difficulties and requiring exceptional patience for its investigation. The greater credit therefore is due to Dr. Ballantyne for attempting to advance our knowledge of this branch of medicine, in addition to classifying in a serviceable manner what is already known about it. A good deal of space in the present volume is assigned to preliminary considerations—the scope of the subject, and the methods of investigation adopted. In connexion with the latter, we observe reference is made to the artificial production of monstrosities—teratogenesis—by subjecting the eggs of various animals to abnormal surroundings. Several chapters are devoted to an historical sketch of the rise and progress of knowledge in all matters relating to the fœtus, from the most ancient times up to the present, and, as might be expected, this part of the book contains much that is curious and quaint. For instance, we read of one Chinese commentator who laid stress on attending carefully to the education of the fœtus in utero and of another who had a simple (!) rule for diagnosing the sex of the fœtus before birth, which was as follows:

"Multiply seven by seven, subtract the age of the mother, add nineteen and the number of the month in the year in which the child was conceived; if the result is an odd number, the child is a male." This rule has at least the merit of being nearly, if not quite, as good as any discovered since. The author next proceeds to consider the classification of the diseases of the fœtus and quotes those adopted by several earlier writers before formulating his own. Dr. Ballantyne ranges them under five principal heads: (1) Idiopathic Diseases—those originating, so far as is at present known, in the fœtus itself; (2) Transmitted Diseases, those due to disease in the parents; (3) Traumatic Morbid States, the results of injuries received either during pregnancy or in labour; (4) Toxicological Conditions resulting from the Administration of Medicinal or Poisonous Substances to the Mother; (5) Death of the Fœtus and Post-mortem Appearances in Dissolution, Mummification, Maceration and Putrefaction.

The remainder of this volume is devoted to the consideration in detail of some of the diseases in Class I.—namely, General Dropsy and General Cystic Elephantiasis. In the second and third volumes—not yet issued—it is intended to continue and conclude the account of diseases of the fœtus; the rest of the work will deal with its deformities. Some idea may be formed of the labour involved in producing the book when we mention that no less than thirty-five works on diseases of the fœtus have appeared in the nineteenth century alone, and that Dr. Ballantyne gives a short abstract indicating the more important points in each of them. We should expect this book to take its place as a standard work of reference on the subject of which it treats.

Researches in Female Pelvic Anatomy. By J. CLARENCE WEBSTER, B.A., M.D., M.R.C.P. Edin. Edinburgh and London: Young J. Pentland. 1892.

THE want of precise knowledge regarding the anatomical changes in the pelvis during the puerperium has been a subject of regret, especially to those called upon to teach students the normal condition of the rapid alterations which take place during the first two weeks subsequent to childbirth. Only an approximate idea can be obtained by physical examination in the living subject or by the ordinary methods of post-mortem investigation. Dr. Clarence Webster has succeeded in obtaining many specimens of the post-partum pelvis which he has described faithfully in this volume. The exact pelvic topographical relationships of six cases are defined and illustrated. In these death resulted on the first, second, third, fourth, sixth and fifteenth days of the puerperium respectively without causing any alteration of the pelvic viscera, so that we have a consecutive series to study in which the progressive changes are visible. In each case the whole pelvis or both the pelvis and the abdomen have been frozen, and by means of sections made in various directions the relation of parts has been examined and carefully reproduced. Fortunately the author has not restricted himself to mere sectional investigation, but has also observed by dissectional study as well—a combined method which, we think, has been rather too lightly regarded. A great mass of facts is accumulated in the first part of the book, and its value is enhanced to practitioners by the statement that Dr. Webster had seen and examined all the cases during life. In a *résumé* he brings together some important information of great interest to the practical obstetrician. In the second part of the volume the female "pelvic floor" is discussed, and the author shows that the too exclusive sectional method of investigation which has prevailed during the last few years has led to certain fallacies regarding the anatomical nature of the lower limit of the pelvic cavity and of its mechanics in relation to parturition and prolapse of the pelvic viscera, especially prolapsus uteri. The disposition of the pelvic floor during the progress of labour is largely discussed and the views of other investigators are controverted. The last chapter deals with the description of the topography in the beginning of the fifth month of pregnancy and is well worth careful study. We congratulate Dr. Webster on the production of such a book, which will prove of great advantage to all interested in the progressive development of scientific midwifery. It is a record of careful investigation carried on in the laboratory of the Royal College of Physicians of Edinburgh, and contains twenty-six full-page illustrations, the majority of the plates having been drawn from nature by the author. The publisher deserves credit for the excellent get-up of the volume.

Bibliothèque Médicale: Charcot-Debove. Les Troubles de la Marche dans les Maladies Nerveuses. Par Dr. P. BLOCQ. Paris: Rueff et Cie. 1892.

WE have already had an opportunity of noticing some of the very convenient volumes in this series. The handy form in which they are published is not one of their least recommendations, and of some of the numbers we have been able to speak in terms of the highest praise on account of their intrinsic merits. The volume before us is an instructive one. Dr. Blocq's intimate acquaintance with nervous disease and his aptitude for careful observation have combined to render his monograph not only readable but very interesting. We would hesitate to say that any valuable additions have been made to our knowledge by this work, but an apparently somewhat barren subject has been treated in a manner which cannot fail to arouse interest. Normal walking is first described, and this is followed by a chapter describing the nervous diseases in which the gait is affected. The four different conditions leading to disturbed gait are next discussed—those resulting from motor affections, those from sensory, those from psychical and those from trophic disturbances. The methods of clinical examination are then described, as also the various abnormalities of gait, their diagnostic value and their treatment being alluded to. To anyone interested in the subject much that is valuable will be found in this little book, and the illustrations are well adapted to explain the text.

Sea-sickness, Voyaging for Health, Health Resorts. By THOMAS DUTTON, M.D. Third Edition. London: Henry Kimpton. 1892.

THIS little work treats of a subject of considerable interest and importance. The author believes that sea-sickness is "caused by two distinct disturbances, being an afflux of blood to the brain and a disturbance of the digestive system." This is a comprehensive if somewhat inexact theory. He is further "fully convinced, after carefully going into some two hundred and fifty cases of sea-sickness, that people who suffer from indigestion are nearly sure to suffer from sea-sickness." In conformity with this view of the causation of the affection, the author recommends the following treatment. Before embarking, a pill composed of podophylli resina, euonymin, pepsin, extract of hyoscyamus, one to be taken every night, and a glass of saline water twice a week before breakfast and regular daily exercise. Three days before going on board a mixture containing bromide of ammonium and aromatic spirit of ammonia to be commenced. This is, on the whole, not bad advice. The above treatment for sea-sickness will probably be found as useful as any other—or as useless. The author also recommends in certain cases ice, Chapman's ice-bag, chloroform given in effervescing iced soda water,

hydrate of chloral, nepenthe, prussic acid, tincture of iodine, nitrite of amyl &c. Like remedies for neuralgia this list might be enlarged *sine limine*. A considerable experience of sea-sickness makes us doubt whether on the whole drugs do not do more harm than good. There can be no objection to an occasional purge before embarkation; and a few doses of bromide may serve to quiet the nerves and act on the mind as much as on the body. Beyond this we should hardly be inclined to go. The author recommends sea voyages in the following cases — phthisis, bronchitis, rheumatism, gout and syphilis, nervous disorders (caused by overwork and worry, particularly insomnia), chorea, neuralgia, melancholia, and hysteria; but thinks them hurtful in diseases of the liver, kidney and eye. These recommendations are open to criticism. The sea voyage is certainly most unsuitable to many bronchitic cases; it is only rarely applicable in rheumatism, the sea air being far too humid for such cases, and a long voyage, with its separation from home and friends and its monotonous round of small pleasures and limited occupations, is rather a questionable remedy for melancholia or hysteria. The remainder of the work consists of slight and not very accurate sketches of the various sea voyages and foreign resorts—e.g., it is stated that Cannes has a moist climate and that the climate of Davos-Platz is unsuitable "for consumptive people in any stage, except perhaps when there are no physical signs at all."

Étude sur le Climat de Pau et du Sud-Ouest Français. Par le Docteur E. DUHOURCAN (de Cauterets). Toulouse: Imprimerie Édouard Privat.

THE climate of Pau has recently attracted considerable attention in our columns. Dr. Duhourcan claims for Pau a high place as a "station d'hiver sédative et tonique"; he asserts that the climate "est calme et fortifie l'organisme." When he adopts the statement that Pau "paraît devoir être un séjour de prédilection pour les sujets chez lesquels dominent les éléments sanguins et nerveux réunis," we confess we follow him with difficulty. We take it that the facts about the climate of Pau are really indisputable, these facts being that the climate is somewhat damp, that the number of wet days is somewhat high, that its most constant effect on the organism is sedative, that it is also to some patients tonic and that it suits many cases of disease which call for a resort that is soothing without being debilitating.

THE MEATH HOME OF COMFORT FOR EPILEPTICS AT GODALMING.

THIS Home, which started under such favourable auspices last summer, has now passed through the first six months of its existence, and no doubt the profession will be glad to hear some account of what has been done during this time.

Lady Meath founded the Home in memory of her father, the late Earl of Lauderdale, and expressed a wish that the institution should take the form of a home and not of a hospital, believing that the treatment of epilepsy was amply provided for in existing hospitals. Her idea was that the epileptic would be benefited by improved surroundings, by regular and suitable occupation, and by getting back into a stream of life from previous isolation, thus bringing forth hope and rendering life more tolerable. In pursuance of this view Lady Meath provided this Home, furnished throughout, and possessing extensive and beautiful grounds. There is no endowment, and though it will to a certain extent be self-supporting the institution must look to the public largely for support; for, allowing that the inmates do much saleable work, its production is expensive on account of the large amount of superintendence required by epileptics.

Those who are admitted are women under the age of thirty-five and children. A weekly charge is made for each inmate, varying in amount from three guineas to eight shillings. The accommodation afforded varies according to the amount of the weekly payment. The institution is quite suitable for ladies of the better classes, of whom there are several at present in the Home. Several beds are subscribed for by the Girls' Friendly Societies in the different dioceses, each society selecting the individual to occupy the bed supported by it, subject to the approval of the committee and the medical officer. The committee do not guarantee any length of stay in the Home, and reserve the right of refusing any case found unsuitable. Applications for admission should be made to the Lady Superintendent, the order in which cases are admitted depending on the urgency of each case. There have been 400 applications for admission, but, as there is at the present time accommodation for only fifty, very many have to be refused.

At first, in such a new undertaking, it is necessary to act with caution and deliberation; but in time no doubt the Home may be enlarged indefinitely, for there is a good part of the building which is yet unoccupied, but which can be easily converted into an addition to the present Home. Every effort is made to provide not only useful and congenial employment, but also to find amusement and recreation. There are ten acres of beautiful grounds well laid out, with lawns and fine timber, for the use of the inmates. Out-door games and walking are encouraged; in the house occupation is found for the inmates, with needlework and school instruction for those who need it, laundry work, knitting (at present a large order is being executed for knitted jerseys), basket making, and blind and screen making; and arrangements are being made to include glove-stitching.

So far the Home has answered the purpose for which it was started. The inmates are contented. Association with others similarly afflicted does not depress them; on the contrary, they appear to take no notice of each other's fits and to gain hope and confidence in themselves now that they feel that they are one of a community and all suffering under a common trouble. Their improvement in appearance as a whole is remarkable.

The profession is well aware of the number of epileptics whose relatives are anxious to place them in a suitable institution, and of the fact that so far this has been impracticable unless they were sent to a medical practitioner's house, a workhouse or an asylum. No doubt for many years the necessity of proper provision for this disease has been becoming more urgent, so that now that a start has been made the profession has an opportunity of "keeping the ball rolling," and of rendering help to a good work by giving it its countenance and support, especially in putting before such as are charitably disposed the claims of homes for epileptics. Unless these homes have the influence and support of the medical profession they are not likely to command the confidence of the public. The Meath Home is open to any member of the profession who may wish to inspect it, and every opportunity will be afforded him to satisfy himself of the worth of this undertaking.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—At the quarterly meeting of the Council the following gentleman, having previously passed the necessary examination, was admitted a Member of the College: Mr. Samuel Whitell Thompson, L.S.A. Lond., Charing-cross Hospital.

THE AFTER-CARE ASSOCIATION FOR POOR FEMALE CONVALESCENTS ON LEAVING ASYLUMS FOR THE INSANE.—A special half-yearly meeting of this Association was held at 83, Lancaster-gate, W., on Jan. 23rd. Dr. Hack Tuke (chairman of the Council) presided. A paper was read by Mrs. R. Henniker (lady guardian of Fulham) on The After-care Association from a Poor-law Guardian's Point of View. A most interesting discussion followed. A Home has just been taken for the reception of female convalescents in Surrey, for which funds are much needed. It has also been decided to extend the work of the Association to the after-care of men, for which branch of the work subscriptions and donations are earnestly invited. The offices are at the Church House, Dean's-yard, Westminster, S.W.

THE LANCET.

LONDON: SATURDAY, JANUARY 28, 1893.

A LONG correspondence of a controversial character between the Committee of the Association of Fellows and the President of the Royal College of Surgeons of England has been published and placed in the hands of the Fellows of the College. It arose out of a regrettable incident which occurred at the meeting of the Fellows held in July last in the theatre of the College at the invitation of the Council. At that meeting Mr. HEATH made some observations concerning Mr. HOLMES, "founded on circumstances which occurred in the Council several years previously and of which no public record had been made." As these remarks were not discountenanced by the President and were not withdrawn by Mr. HEATH, "Mr. HOLMES wrote to Mr. BRYANT asking him as President of the College to lay before the Council a letter in which he called the attention of the Council to this violation of confidence in one of its members," and to a course of action which was calculated to "prevent the free expression of opinion on the part of one of the Fellows of the College which the President had himself invited." In his reply refusing to submit Mr. HOLMES'S letter to the Council of the College the President said, "You have allowed statements which were far from correct to have been issued with your sanction in the name of an Association against the Council without the slightest attempt on your part to do justice to the body on which you served." This charge appears to have been interpreted by the Committee of the Association, which it directly involved, as "a twofold charge against Mr. HOLMES—a charge of intentionally propagating misstatements to the detriment of the Council and a charge of deliberately suppressing truths favourable to the Council," and as Mr. HOLMES, who is a Vice-President of the Association and has been one of its most active members, could, in their opinion, obtain redress in no other way the Committee, it appears, decided to write to the President for an explanation, and this they did on July 22nd in a note which ended thus: "We beg to say that, if any such incorrect statements have been made, they have been made unwillingly and unwittingly, and if you will kindly indicate them we shall be ready and willing to correct them and express our regret for them, as we believe we may rely upon your sense of justice to withdraw your charge if you are unable to substantiate it." The President thereupon wrote to the committee asking to be furnished with the past papers of the Association. The report of the proceedings of the Association published in 1892 does not appear to have been sufficient and he applied further for the printed circulars of earlier dates. In the absence of the hon. secretary of the Association during the vacation time a letter, it appears, was drafted and sent to him to the effect that there were no more papers available and that it was no part of the duty of the Committee to supply the President with documents to enable him to substantiate the accusatio which he had made. The President then fixed upon three statements made on behalf of the Association to the Lord President of the Privy Council as far back as November, 1887, and January, 1888, and to these he appended a "refutation." The first two statements related to proposals made by Mr. HUTCHINSON in 1885 for widening the basis of the Fellowship, proposals which the Committee of the Association of Fellows had reason to believe they had been largely instrumental in modifying or defeating. In contesting the version given by the Association, the President seems to imply that the word "proposals" must mean formal proposals or "motions" made at a meeting of the Council, and not proposals made in committee or in conversation at the College or elsewhere. As the proceedings of the Council and its committees are not transacted in public, it is almost impossible for Fellows not on the Council to obtain absolutely reliable information as to such proceedings or to become aware of the exact manner in which proposals attributed to members of the Council are brought forward, or in what stage they may be defeated. In the present instance we can supply a few of the missing links, and must leave our readers to judge whether these are in favour of the statements made by the Committee. On Nov. 14th, 1885, Mr. HUTCHINSON gave notice at the Council of the following motion to be discussed at the next meeting: "That the Council do take into consideration proposals for widening the basis on which the Fellowship is obtained." At the next meeting, Nov. 17th, Mr. HUTCHINSON brought forward his motion, which was seconded by Mr. BRYANT. In his speech he made some sweeping suggestions for widening the basis of the Fellowship. A discussion ensued and ended in the motion being deferred for consideration till the next meeting, on Nov. 24th, but with this additional agreement that Mr. HUTCHINSON'S suggestions should be printed and sent to each member of the Council. On Nov. 24th Mr. HUTCHINSON'S motion was deferred till Dec. 10th, when he was allowed to move instead for a committee to consider and report to the Council whether it was desirable in any way to widen the basis on which the Fellowship was obtained &c. His printed suggestions were, we believe, referred to that committee, and they did not come before the Council again, inasmuch as the Committee of Council reported in favour of a different scheme, and the Council, on March 11th, gave its sanction to what the Committee of the Association properly designates as "objectionable proposals for widening the basis of the Fellowship," proposals which were "on the same lines as the larger proposal attributed to Mr. HUTCHINSON and only in degree less injurious." The exact share which the Committee of the Association had, through its condemnatory resolution passed on Feb. 1st, 1886, in modifying Mr. HUTCHINSON'S proposals, cannot be ascertained, but the actual proposals of the Council were opposed energetically by members of the Association at the general meeting of Fellows and Members in 1886 and the Association of Fellows of the College can claim the substantial credit of that victory. The Association maintained a watchful attitude at a time when, owing to the urgent claims of the Members of the College, there appeared to them to be considerable danger that the academic status of the Fellowship might be seriously lowered for the purpose of endeavouring in-

directly to satisfy the just demands of the Members of the College for a direct concession to them of a *bonâ-fide* share in the government of the institution. From the foregoing account it will be gathered that Mr. HUTCHINSON'S proposals were brought forward at a Council meeting and to some extent discussed, that they were placed in print before every member of the Council, and that it was in consequence of his suggestions that a committee decided to widen or to lower the basis of the Fellowship. The third statement to which the President took exception was to the effect that the number of Fellows who constitute the elective body had been for some time steadily diminishing. This statement, it should be remembered, was made in January, 1888, and was perfectly accurate, and how Mr. BRYANT could include this amongst the inaccurate statements and think he had proved that it deserved this designation by showing that *since* 1888 the number of Fellows by examination had almost counterbalanced the losses by death, would seem difficult to understand. The answer of the Committee of Nov. 10th, 1892, to the President's letter of Oct. 20th appears to meet all his points and fully vindicates the substantial accuracy of the Association of Fellows in its letters, publications and proceedings. It would have been lamentable if it had been otherwise. The Association of Fellows has had to fight single-handed on behalf of the Fellows against the exclusiveness and autocracy of the Council of the College. In doing this it has necessarily come into collision with the conservative, official and stereotyped elements in the Council. Its letters, communications, resolutions, memoranda and reports have been narrowly scrutinised and eagerly criticised. Any appearance or savour of an inaccurate statement has been seized upon and immediately brought to the notice of the honorary secretary. The recollection of a few corrections by the Council seems to have misled the President of the College and induced him to formulate a general charge of inaccuracy which he has certainly failed, we think, in fastening upon Mr. HOLMES or the Committee of the Association. It must be remembered that the Committee of the Association is composed of Fellows as high-minded and honourable as the Fellows who constitute the Council of the College, and animated with but one desire, which is to secure for the College the best possible constitution and to increase its range of influence for good both with the profession and with the public. It is not to be supposed that they are in any wise more free from the liability to error than are the Fellows composing the Council of the College, but they are at least far removed from any desire or intention to advance their cause by making unjust attacks on the Council or indulging in intentional misrepresentations of its actions and decrees. The tension between the Council and the Association has been so great in the past that it is not perhaps to be wondered at that an explosion should have occurred; but we were taken by surprise at its occurring at a time when the air is comparatively serene and when it resembles a bolt from the blue. Now that it has happened we trust that the Association will be able to press forward with the work of obtaining for the Fellows of the College as influential a position as that occupied by the Fellows of the sister College, the Royal College of Physicians of London; may we further hope that when opportunity occurs they will lend a helping hand to the cause of the Members of the College, whose just claims must by no means be ignored.

THE newly organised Labour Department of the Board of Trade, which was on Tuesday last introduced to public notice by Mr. MUNDELLA, will, if it give effect to the intentions of those who have established it, serve a very useful purpose. The plan upon which it has been constructed is in its main features not new—that is to say, the Labour Department is for the most part to be occupied in carrying on the work relating to Labour Statistics which has heretofore been undertaken by the commercial and statistical departments of the Board of Trade. But even this work will hereafter be committed to a larger and better-organised staff, and it may reasonably be hoped that it will exhibit the result of improved conditions in a proportionate improvement in the quality of the work. The object of the Government is, however, by no means restricted to the improvement of existing machinery or the more efficient performance of existing tasks. It aims also at the performance of new functions and proposes to cast upon the new department duties which heretofore have been left undischarged or discharged only by private enterprise. Thus one of the first undertakings of the office over which Mr. BURNETT is to preside will be the issue of a monthly newspaper to be entitled the *Labour Gazette*, which will present in small compass and intelligible form the main results of official labour in the collection of facts and the compilation of statistics illustrating the multifarious questions in the discussion of which the labouring classes are most immediately interested. Thus its staple of news will consist of such matters as trade disputes, arbitrations, changes of sliding scale, apportionment of work amongst different trades and the like, together with reports of important actions at law in which the interests of workpeople are involved, and meetings and conferences in which these interests come under discussion. On the other hand, the monthly report of the factory and mines inspectors and other matters of that kind will be digested and presented in a succinct and collected form. It is plain that there is here a very large scope for useful work in the diffusion of trustworthy information upon matters which are much discussed but little understood; and if the duty of conducting such a journal is skilfully discharged the result will be a work of great utility and truly national importance. But while we recognise the spirit in which it has been undertaken and wish for the new organ the largest possible measure of success, we must reserve our approbation for a later period, when the position which it will take and the work which it will do have been made manifest by the test of experience. The conduct of a newspaper, even of such an one as can be issued from a Government office, is a task of difficulty demanding more than good intentions for its due performance. The very considerable success of the *Board of Trade Journal* in a position very analogous to that which appears to be marked out for the *Labour Gazette* affords ground for hope that this latest development of official industry will attain success; but the praise of success can only follow the evidences of success, and accordingly we abide the unfolding of events in

this department with the best wishes, but with an open mind.

A further object which it is sought by the present change to compass is that of facilitating inquiries into matters falling within the jurisdiction of the department upon which special information may from time to time be desired. These inquiries will, we presume, partake of the character of those investigations which the Board of Trade at present carries on by means of its railway inspectors, for example. The duties which these gentlemen discharge, and discharge in a very admirable manner, are for the most part of a quasi-judicial character and resemble very closely an inquest conducted by a coroner, except in respect of their subject matter, which is not, as in the case of the coroner, the cause of death, but most commonly the cause of a railway accident. These inspectors, however, are by no means restricted to one particular class of subject-matter; they are, indeed, occasionally detailed for work of a much more imposing character, partaking largely of the nature of those inquiries preliminary to legislation which are usually confided to a Committee of Parliament. To such an examination all those schemes of private legislation are subjected which have to be promoted by means of a provisional order of the Board of Trade, and it is, we presume, to inquiries of this class that Mr. MUNDELLA alluded when he proposed that the new Department should address itself to such questions as the attempts made at home and abroad to relieve distress by public works, the effects on labour of noxious processes in trade and the like. That much is to be done in these departments by inquiry for which the machinery of a Royal Commission or of a Parliamentary Committee is not available has been abundantly shown on many occasions, and perhaps no more striking illustration of this truth could be adduced than the revelations concerning sweating in various trades which have resulted from the labours of our own Commissioners. Mr. MUNDELLA enumerated among his examples of inquiries waiting to be undertaken by the Labour Department those into the conditions of the employment of children and of labour in white-lead works. These and many others have been illustrated by the labours of representatives of THE LANCET, who have informed the public of facts of which the Government inspectors had apparently remained in ignorance. Indeed the inefficiency of the Home Office inspections is a point admitted even in official circles, and was the subject of simultaneous discussion by Mr. ASQUITH with a deputation which had waited upon him with representations touching this matter and which received assurances that serious endeavour was being made by a reorganisation of the official staff to improve the working of the existing system of factory and workshop inspection. It would of course be unfair to treat Mr. MUNDELLA'S list as anything but a collection of instances taken more or less at hazard, or we should desire to make not a few additions to it, and in particular to observe that amongst the very first matters to which the attention of his labour correspondents should be directed is the subject of the bakeries of London and of some of our large towns.

But the time for criticism has not arrived. At this moment we are happy to be able to congratulate the Government on having taken a step which will be approved by a considerable section of the community. Much in their programme is necessarily more or less indefinite and many things are incomplete. This does not matter; indeed, the worst possible fault about such a scheme would be that it should be hidebound and inelastic. The important point is that a well-meaning start has been made. The exact direction to be eventually taken must depend upon conditions which at present can be discerned only in part.

THE approaching visit of Her Majesty the QUEEN to Florence will naturally direct attention to the beautiful Tuscan capital and to its merits as a spring residence. That the Sovereign appreciates its manifold charms and has benefited by its climate is evident from the fact that she is again, after a not very long interval, about to repair thither. The choice is a very natural one. Unsuitable as Florence is at most seasons for grave cases of disease, few cities in Europe can rival it as a place of temporary sojourn for those who wish to escape the cold and rawness of the English climate in early spring and to enjoy at once southern sunshine and warmth, natural beauty and the accumulated treasures of art. In picturesque charm of situation, in wealth of painting and sculpture, in historic associations appealing alike to antiquary and politician, to art critic and *littérateur*, Florence has hardly a rival. Of modern cities—excluding for the moment such ancient cradles of fame as Athens and Rome—Florence has been said to have been the most prolific of great men—a high claim; but in view of such names as DANTE, GALILEO, MICHAEL ANGELO, RAPHAEL, ALFIERA, BENVENUTO CELLINI, ANDREA DEL SARTO, CIMABUE and CHERUBINI—all of whom were Florentines either by birth or residence—we may well pause before we dispute its validity. Why a single city of moderate dimensions should have such unparalleled fertility in genius of the first quality and in the most varied fields is a question which history and anthropology might essay to answer, but probably with scant success. The air of Florence, like that of Athens, would seem to have nourished lofty aspirations, a marvellous insight into the beauties of nature, and wonderful technical facility in the arts. The history of the city—a record of restless energy and painful activity, but also of strife, dissension and the utmost malignancy of party hatred—may or may not serve to throw light on the fertility of Florence in genius according to our preconceived opinions and point of view. We might suppose *a priori* that an atmosphere of calm and undisturbed meditation would facilitate the labours of a poet, painter or philosopher, but the evidence does not uniformly support such a theory. The genius of Athens blossomed most abundantly during the long agony of the Peloponnesian war. In modern times no period has been more fruitful in intellectual activity than that of the French Revolution and the devastating wars which succeeded it. In fact the quality of genius is a mysterious phenomenon which we may well despair of adequately explaining. It is inexplicable in its origin and manifestations; and while we note its influence and cherish its fruits we cannot formulate the laws which govern it or predict its course.

Next to its productiveness in art Florence excites our interest most by its history. Within its walls some of the most difficult problems of imperial and municipal polity were fought out with signal steadfastness and ability, but also with a not less signal ferocity and unscrupulousness. The feud

of GUELPH and GHIBELLINE, Papist and Imperialist, which devastated so much of mediæval Italy, attained its maximum of fury on the beautiful banks of the Arno. The hardly less bitter feud of peasant and noble, of municipal freedmen and the old *noblesse*, found one of its chief centres in Florence. Assassination, ostracism and spoliation had there a long and evil day, and we may well wonder how in such an atmosphere poetry, painting and sculpture rose to their sublimest heights.

The climate of Florence cannot be estimated highly from the point of view of the invalid. The city lies in the open valley of the Arno, with little shelter in its immediate vicinity, and is fully exposed to the cold winds which sweep down from the snowy peaks of the Apennines. Hence the climate is one of extremes, the heat of summer and the cold of winter being both great. The mean temperature of January is 41° and that of July is 77°, while the maximum for the year is 130° and the minimum 12°. These figures indicate a climate destitute of that equability which we look for in any winter resort for invalids. Nor can Florence boast of its sanitation. Typhoid fever and diphtheria have often been unduly prevalent there, though we may hope that in these matters of hygiene—so essential to a city which aims at attracting the patronage of foreign visitors—improvements are going on.

The climate of Florence is unfavourable to sufferers from phthisis and is in the main unsuitable for most pulmonary cases; but it possesses great and exceptional advantages for that large class of neurotic and dyspeptic patients who need not so much a climate of special mildness and equability as plenty of sunshine, stimulation, fine scenery and objects of historic interest and artistic charm. These can all be found in Florence and to a degree rare elsewhere. Acute affections of the lungs are said to be somewhat common in Florence, so the usual precautions against chill must be insisted upon with special strictness. In Italy, as in so many warm countries, it must never be forgotten that the construction of the houses and the domestic arrangements generally are regulated with regard to the long summer and not to the short winter. Hence the temperature of Italian houses, churches, galleries &c. which are so wonderfully cool in hot weather is apt to be dangerously low in the winter. Warm woollen clothing should therefore be worn even at the cost of some inconvenience, and caution should be exercised by persons going from the sun into the shade when perspiring or overheated. Other precautions will naturally suggest themselves and need not be specially enumerated. The climate of Florence is at its best in the months of October, November, March, April and May. In December, January and February the cold winds are felt with much severity, while in July and August the heat is excessive.

It is impossible to leave the subject without feeling how much Italy and Italian genius have done in developing the instinct of beauty amongst the nations of men. The Italian has looked on nature with loving and observant eyes, has sought earnestly after her secrets, and has in consequence brought forth fruits which render all humanity his debtor.

THE impotent result of the adjourned meeting of the Conference on the recommendations of the Lords' Committee on Metropolitan Hospitals held on Tuesday last at the London School Board is somewhat disappointing. Lord SANDHURST presided, and pronounced the meeting to be one of the most remarkable gatherings he had ever attended. Virtually the only point discussed by the Conference on Tuesday was the formation of a central body of some description which should supervise and coöperate with the existing medical charities. The special committee appointed at the meeting at Spencer House in July, regarding the formation of such a board as the salient recommendation of the Report of the Lords' Committee, had appointed a subcommittee to deal with this portion of the subject, consisting of Lord SANDHURST, Sir ANDREW CLARK, Mr. DIGGLE and Mr. H. C. BURDETT; and it was the report of this subcommittee which was disposed of on Tuesday. The subcommittee considered the formation of a Central Board in the spirit of the recommendations of the Lords' Committee practicable. The following was the composition of the Board suggested by the subcommittee:—

The basis of the representation upon the Board should be the committees of distribution of the Hospital Sunday and Hospital Saturday Funds. The latter committee, it was stated, numbered fourteen members, and it was suggested that the Hospital Sunday Fund should be asked to add four members of their council to the ten members of their distribution committee. It was further suggested that the representatives of the hospitals and dispensaries should be equal in number to those of the two funds combined—twenty-eight. The committee recommended: (1) That each of the twelve endowed and general hospitals with medical schools should nominate one representative each; (2) that any other hospital not included in Section 1 which had had a daily average of 150 beds occupied during the previous year, should nominate one representative each. At present, it was stated, five hospitals fell within this category. The remaining representatives should be elected by the medical charities participating in grants from the Hospital Sunday and Hospital Saturday Funds upon the following basis—viz., each institution to be entitled to one vote for every £100 or part thereof granted by the distribution committees of the Hospital Sunday and Hospital Saturday Funds. The subcommittee further suggested that each of the following eight bodies should be entitled to send one representative—viz., Royal College of Physicians, Royal College of Surgeons, the General Medical Council, Society of Apothecaries, General Practitioners, University of London, London County Council and the Metropolitan Asylums Board. The Board would therefore be composed of sixty-four members.

Whilst elaborately defining the constitution of the Board, the subcommittee was not explicit as to its functions. Lord SANDHURST, whose interest in this question has been so sustained, indicated that in the opinion of the committee it was better to leave these somewhat open and undefined. He was careful to say that the Central Board would not interfere with the administration of any hospital or with the position of the Hospital Sunday and Saturday Funds, whilst it would bring the councils of these funds into friendly coöperation with those who were grappling with the difficulties of hospital administration.

The adoption of the report was moved by Lord SANDHURST and seconded by Mr. BURDETT. But it was soon apparent that it was not to have a very cordial reception.

Sir DOUGLAS GALTON objected first to the constitution of the Board and then to the creation of such a Board without any clear definition of the functions it was to undertake. He thought the representation of the Hospital Sunday and Hospital Saturday Funds excessive and that they might swamp the representatives of the hospitals and in the vague and elastic description, or want of description, of the duties of the Board, he saw a danger of meddling with the affairs of hospitals. In the end he proposed that the report should be referred back to the Committee, and the proposal, seconded by Mr. BOUSFIELD, was carried by the overwhelming majority of 18 to 3. Mr. DIGGLE moved to insert words approving the principle of a Central Board, but was beaten on a division by 13 to 7. Mr. HOLMES protested against the inference of the chairman that these votes meant a determination to have no Central Board. A resolution adjourning the Conference, and instructing the subcommittee to obtain the opinions of the governing bodies of the institutions concerned, was lost by 12 votes to 9.

It is to be regretted that the subcommittee appointed to consider such an important report was not larger and more representative; and it is also to be regretted that the opinion of the various bodies had not been tested before this meeting of the Conference. The result of the Conference cannot but discourage the members of it and seriously depress those who are anxious to see our voluntary medical charities placed on a sound basis. We have felt since the publication of the Lords' Report that it dealt too weakly with some acknowledged evils and abuses of administration. And it is obvious that the committees and governors of perfectly voluntary charities will not brook any ill-defined interference with their work. At the same time this problem is not insoluble, and we urge the Conference to reconsider the whole question after repeated interviews with those who, amid immense difficulties, are carrying on the voluntary hospital system of the metropolis. There must be some form of Central Board, but its powers must be well defined and there must be the least possible invasion of the voluntary principle.

Annotations.

"Ne quid nimis."

"THE PUTNEY MYSTERY."

DURING the last fortnight the columns of a daily contemporary have been open to a correspondence dealing with the question "Is Christianity a failure?" It is not our province to take part in religious polemics and we allude to it now merely to draw attention to the influence of Christianity over human conduct in the exercise of the profession and practice of medicine. Our estimate of the sanctity of human life, and the legal enactments which hedge it round, safeguarding it not only in the adult, but in the pre-natal and infantile stages of existence, are undoubtedly due to the teachings of Christian morality. In pre-Christian times amongst the most highly civilised nations abortion was not a punishable offence, but when Christian influences began to predominate in the councils of legislators it soon found its way into the catalogue of statutory crimes. We have many times in the most emphatic manner expressed our condemnation of a procedure at once unnatural, cowardly and villainous, and have spared neither the instigators nor the perpetrators of the sinful and unlawful deed. Nay more, we have emphasised the fact that members of the medical profession who lend themselves to such a procedure are doubly guilty, inasmuch as they alone can measure fully the attendant risks and dangers to the mother, to say nothing of the certainty, in the event of their desired success, of the destruction of the products of conception. We regret to find that the tendency on the part of juries and the executive is in the direction of showing leniency to miscreants guilty of the crime in question. Whilst the statute makes it a criminal offence even to attempt to procure abortion, whether the woman be pregnant or not, and, in the case of death of the mother, regards the felony as wilful murder, we generally find in the face of the most carefully laid plans to compass abortion the verdict returned is manslaughter only. Juries are not alone in the exercise of clemency, for, indeed, the judges' directions, which must, to a great extent, guide them in their findings, lean the same way. This we see not only in the summing up but in the corroborative sentence. We are not in favour of unmerciful punishment, but if the sentences passed on professional abortion-mongers are to act as a real deterrent they must be severe and exemplary. The case tried at the Old Bailey last week brings the whole question of criminal abortion most forcibly to our notice. The victim, Ellen Franklin, a single woman, was advanced in pregnancy about three months. She was intimately acquainted with Charlwood, one of the male prisoners; indeed, it was he who secured the paid services of the surgeon Freeman, now a fugitive from justice. Freeman, it appears from the evidence, sent the woman to be treated by him to the residence of Herbert William Francis, an unqualified person, whose wife aided Freeman in his nefarious practice. The facts disclosed by Mr. Bond, who made the post-mortem examination, proved that great violence must have been used, for the uterus, though lying in position, was torn from its attachments and lay loose in the cavity of the pelvis. There can be no doubt that death ensued from shock, the result of the mechanical violence and the hæmorrhage, and not in any way from such causes as the fabricated, lying certificate of Freeman, endorsed by Francis, purported to show. The prisoners were convicted and severally sentenced—Charlwood to five years' penal servitude, the woman Francis to three years' penal servitude, and her husband, as an accessory after the fact, to six months' hard labour. The convicts, especially the two former, have reason to congratulate themselves on their escape from a more severe retribution. On more than one occasion we have pointed out the difference of opinion held by our judges as to the enormity of the offence of criminal abortion—at least if the punishment they determine can be taken as an expression of such opinion. Some few years ago a medical man was sentenced by Mr. Justice Day at the Warwick assizes to ten years' penal servitude simply for attempting to procure abortion. Shortly afterwards, at the Central Criminal Court, another judge gave exactly the same period in a case where the convict compassed the death of the mother. Our object in again adverting to what seem to us to be uncertain and unequal sentences is to draw the most serious attention of the members of the profession, and through them of the public, to a crime which there are too good grounds for believing is rife in our midst and which must necessarily in many instances unfortunately remain undetected.

THE INTERNATIONAL MEDICAL CONGRESS.

CONCURRENTLY with the Congress which will meet in Rome on Sept. 24th there will be opened an Esposizione Internazionale di Medicina ed Igiene (International Exhibition of Medicine and Hygiene), an important feature in which will be the Alimentary Section, including the most favourable

specimens of Italian wine-growing. As the International Medical Congress will hold its sittings in the Policlinico, so the Exposition will be accommodated in the magnificent Palazzo delle Belli Arti (the "Burlington House" of Rome), which, situated in the Via Nazionale, will be central enough to be convenient for the visitors, while not too far from the Policlinico. The use of the Palazzo in question was kindly granted to the committee of the Exposition by the Communal Administration, which even thus early has been coöperating with the Municipio and the Government itself to make all the arrangements for the Congress as perfect as possible. Another request addressed by the committee of the Exposition to the Communal Administration has not yet received a definitive reply—the request that the gardens in front of the Quirinal might be placed at the committee's disposal. If the reply be in the affirmative—and no effort will be spared on either side to make it so—then the visitors may be congratulated on a privilege truly enviable, that of enjoying the noblest of views from terraces of great historic interest, under the shade of trees which will be doubly grateful in the still, warm air of the early Roman autumn. The artistic and natural advantages of the Eternal City will indeed be so utilised by the Central Committee as to make the eleventh International Medical Congress unique in its attractiveness, a result to be expected from its ruling spirit and actual president, Dr. Guido Baccelli, who, as Minister of Public Instruction, brought to light the Hall of the Vestal Virgins and devised the far-famed "Passeggiata Archeologica" or Archæological Promenade.

LONDON WATER COSTLIER THAN CHAMPAGNE!

IT is hardly surprising that the City Sewers Commissioners are taking great pains to provide the artisans' dwellings in their district with an independent supply of pure water when it appears from a statement made by Mr. Alderman Treloar at a recent meeting of the Commission that in some cases the amount paid as water-rate was so excessive for the quantity used that it would have been cheaper to have used champagne. The artesian well, the construction of which was commenced some time since, is now completed, and the Commission hope that in the future the ample supply of water from this source may be utilised for the ordinary inhabitants of the surrounding district. The amounts which could be and were legally charged by the water companies were, it was said, most excessive, and it was felt that the Commission should in every way endeavour to bring about some alteration in the present system. We trust that their efforts will be successful in removing a condition of affairs in which the interests of public health are seriously concerned. Now that an artesian well has been completed, which yields, according to Dr. Saunders' report, water of irreproachable quality, the consumers may be released from an odious tax which demands a greater price for aqua pura than for the most expensive wine. It is too much to expect to have our clothes washed and our sewers flushed with a liquid that is even costlier than champagne.

THE DIFFUSION OF SMALL-POX.

WEEK by week the diffusion of small-pox proceeds on an extended scale, but with the exception of some half dozen places the outbreaks are neither on a wide scale nor do they present indication of special virulence. The list of places attacked is, however, a large one. Amongst them we would note as follows:—Alcester, Barnsley (where 4 fresh cases occurred last week and where 16 cases are in the Kendray hospital), Batley, Bedale, Birmingham (where tramps are in question), Blyth, Blackburn, Bolton, Bradford, Bridgend, Brighouse, Coventry, Chadderton, near Oldham (with 10 fresh attacks), Cleckheaton (in the neighbourhood of which the disease is spreading), Chester-le-Street (where the disease has appeared in common lodging-houses), Derby, Durham (near which the disease is gaining ground), Dewsbury (where 16 cases are in hospital), East Marton, near Skipton (where navvies are attacked), Halifax (where 15 new cases occurred last week), Hendon (where the workhouse is infected), Huddersfield (where a temporary hospital is being erected), Hull (where 3 cases have occurred in the prison), Keighley, Lancaster, Leicester (where 11 fresh attacks were recorded last week), Leyton, Leeds (where between 50 and 60 cases are in the hospital), Linthwaite (where 13 cases have occurred), Llanelly (where a tramp has introduced the disease), Liverpool, Macclesfield, Manchester (where 200 cases have occurred since the beginning of December and where an attempt to erect a hospital in Withington is being opposed before Mr. Justice Chitty), Middlesbrough, Newcastle-on-Tyne, North Bierley, Northampton, Northallerton (where danger arises from tramps), Oxford, Oldham (where 15 fresh attacks have occurred), Pontefract, Rotherham (where there are 9 cases in the workhouse), Salford, Scholes, Settle, St. Helen's (with 6 fresh attacks), Sheffield, Southampton (where the disease still extends and proper isolation arrangements are for the moment exhausted), Solihull, Sunderland, Skipton, Stockport, Thetford (where the disease has assailed the workhouse), Tynemouth, Wakefield (where about 20 are in hospital), West Hartlepool, Willington, Warrington (where the disease still lingers, 12 fresh attacks having occurred last week) and Yeadon. From Scotland comes news as to the disease in a number of places, such as Dundee (where special appointments have been made to secure rapid vaccination), Edinburgh, Glasgow (where 34 new cases have arisen in ten days and the disease is still spreading), Kirkcaldy and Rutherglen. And from Ireland we hear of cases at Belfast. In the metropolis the number of cases under isolation in the hospital ships has steadily increased to 72, but there was only one fatal attack last week. The present aspect of affairs gives point to our comments of last week. We cannot cope with the erratic movements of our ignorant tramp and pauper classes except by preparing ourselves in advance by a recent vaccination against such small-pox as these classes may at any moment bring into our midst. This lesson cannot be too strongly impressed on all.

TAKING THE OATH WITH UPLIFTED HAND.

A CORRESPONDENT has forwarded us a cutting from the *Sheffield Daily Telegraph* with a report of an inquest held upon the body of a carter who died in the General Infirmary. This report is headed "A Sheffield surgeon afraid of infection; he declines to kiss the book" in capital letters. Under any circumstances such a heading would be objectionable, but, as we shall see, it is deserving of a much stronger expression. But the editor and the reporter of our contemporary are not the persons on whose shoulders the blame must rest. It appears that at the inquest, which was held at the infirmary, Dr. W. S. Kerr, the assistant house surgeon, was called as a witness. When the Bible was given him to take the customary oath he said he preferred not to kiss the book. He would rather hold up his right hand. In so doing the witness was within his strict legal rights. "If any person to whom an oath is administered desire to swear with uplifted hand in the form and manner in which an oath is usually administered in Scotland he shall be permitted so to do and the oath shall be administered to him in such form and manner without further question." The coroner, however, proceeded to ask the witness if he could give him any reason for not kissing the book and if he had any conscientious objection to take the oath. The witness answered the coroner that it was from a personal point of view. The coroner proceeded to ask four more questions, pressing and urging Dr. Kerr to kiss the open page, but the latter

stuck to his guns as he was bound to do and gave as his objection the risk of infection. In this he made a mistake against which we warned medical witnesses in THE LANCET of the 7th inst. Dr. Kerr would have been perfectly justified in refusing to give any reason except his desire to be sworn with uplifted hand in Scotch form. Dr. Kerr is an M.B. and C.M. Edinburgh, and was previously house surgeon at the Dumfries and Galloway Royal Infirmary. He had probably, therefore, been sworn while in Scotland and very naturally preferred the more cleanly mode of adjuration employed in that country. He deserves every credit for his courage and persistence. Every medical practitioner should procure a copy of the Act, which may be had for one halfpenny, and carry it in his pocket. He will then be in a position to show what is the law to those who may not happen to know it. This new mode of adjuration is spreading rapidly all over the country. In the London Probate Court on the 13th inst., in a will case, Mr. Ambrose Brooke George, surgeon of Whitchurch, Salop, who was a witness, was permitted to swear with uplifted hand. A legal contemporary, the *Law Times*, in a leading article recently referred to a sessions case which occurred in Ireland where a witness suffering from cancer left the mark of his lips on the book, and in consequence the use of the book was dispensed with. We hope that before long other witnesses and jurors will follow the example set by medical witnesses.

CIVIL LAW AND INEBRIETY.

THE third of a course of lectures on Inebriety was delivered by Dr. Norman Kerr on Tuesday last. The subject of the lecture was "The Bearing of Inebriety on Civil Law." At meetings of creditors, acting under his advice, legal advisers had refrained from calling as witnesses persons whose brain had been so affected by intoxicants as to dim the perception of truth and render their evidence valueless. In Quebec and New Brunswick the interdicted inebriate lost his civil rights. New York State law deprived the inebriate of the management of his property. In testamentary disposition a question arose concerning incapacity due to inebriety. Cases were cited to show legal recognition of a diseased inebriate state. To invalidate contracts the incapacity from intoxication must be complete. In American practice a defendant's partial intoxication did not void a contract unless the plaintiff purposely caused the intoxication; but total drunkenness voided any contract. In Dutch law a contract entered into in a tavern was not valid unless ratified within twenty-four hours. In a recent case in Scotland Lord Wellwood held that it was not necessary to prove total insensibility. As to inebriate incapacity to attest the presumption was in favour of validity. A man might be moderately drunk, yet legally capable. Medically, a person might be outwardly capable, yet incapacitated, as in inebriate trance. Wills might be proved invalid if executed when the person was intoxicated. It had been ruled that incapacity to know the nature and consequences of the act of marriage might render the contract void.

A FATAL ERROR IN DISPENSING.

IT is not often that the notes of a coroner's inquest afford such melancholy evidence as that which recently proved the death by misadventure of a railway platelayer at Ratcliffe-on-Trent. This case is one which possesses a special and painful interest for medical men, as the following facts will show. The deceased—a man of thirty-two—was suffering from catarrh, for which he had been under treatment by a practitioner in the district. Unfortunately his name was identical with that of another patient, also a workman, who was using aconite liniment for a sprained arm. Both of these patients applied on the same day for a renewal of their several remedies and thus there occurred a grievous error in dispensing. Misled by the identity of name the practitioner supplied the liniment to the wrong patient, and in spite of the fact that the mistake was quickly noticed the aconite preparation was taken internally, and all subsequent corrective measures failed to save the life of the unfortunate platelayer. We should not omit to notice one important fact which was elicited by the inquiry. The medical attendant's servant, when interrogated, stated that she expressly mentioned the liniment as the remedy which was required by the deceased workman's messenger. On hearing all the facts of the case the jury had no hesitation in absolving the act which ended thus fatally from all connexion with manslaughter, and held it to be due to mere accident or inadvertence. With this opinion our own entirely coincides. In making this admission we by no means acquit the unwilling agent of all blame in this matter, or deny that due caution on his part would not have had a very different issue. We should nevertheless be utterly wanting in justice if we held as due to crass negligence an error which might almost be considered as naturally induced by the peculiar circumstances of its occurrence. The lesson, however we regard it, is a bitter one and should impress itself upon the memory of every practitioner. It involves, moreover, an obvious point of precaution which the coroner in the course of his remarks at this inquest did not fail to notice—namely, the necessity which ought to be incumbent upon dispensing medical practitioners, as it is upon chemists, of issuing poisonous mixtures, and especially liniments, in bottles of special construction and having an appropriately descriptive poison label. We must, in closing these remarks, offer to the practitioner so painfully associated with this case our sincere sympathy in the grief which has so suddenly overtaken him and which he keenly feels—a grief the greater that it cannot but entail some self-reproach, and we would acknowledge with respect his entirely handsome and straightforward conduct in the course of the investigation.

"NE SUTOR ULTRA CREPIDAM."

IN the Court for consideration of Crown Cases Reserved, on the 23rd inst., judgment was given in the case Reg. *v.* Williams. The prisoner, a boy under fourteen years of age, was indicted and convicted at the Mold Spring Assizes, 1892, before Mr. Justice Vaughan Williams, for having committed an indecent assault. The indictment was made under Section 4 of the Criminal Law Amendment Act. It was to the effect that the prisoner had "feloniously, unlawfully and carnally known a girl under the age of thirteen." The jury having found that the boy was not fourteen years of age, the judge directed that he could not be tried for rape or an attempt to commit a rape, but that he could be tried under Section 9 of the said Act for indecent assault. The question reserved for the Appeal Court was whether the indictment was good in law, that is to say, whether, it having been made under Section 4 in terms which implied rape, or attempt at rape, a conviction could be obtained under Section 9, which covered the minor offence only. The judges upheld the decision of Mr. Justice Williams. The contention by the defence was that the prisoner, having been indicted for indecent assault under the section which referred to rape, could not be convicted under another section. The judgment on appeal, apart from common law, was obviously in consonance with common sense. The question we wish to draw attention to is the inconsistency of the civil and the criminal law as regards the age at which a person may be charged in the one case and indicted in the other. The criminal law enacts that a boy under fourteen cannot be indicted for rape or attempted rape. On the other hand, where a magistrate has to determine an alleged paternity, the question of competency is left to his judicial

discretion, and cases are on record where a boy has been adjudicated the father of a child at an age when he could not be indicted for an offence the sequel of which may have rendered him liable to a claim for the support of his alleged offspring. It may be said that the Legislature wisely allows greater latitude in civil than in criminal cases; but to this we reply that there is no reason why physiological laws should be set aside to satisfy the legal subtleties of lawgivers. The case under notice affords another flagrant example of the muddle lawyers make in the simplest problems of medical jurisprudence, and this is primarily due to the utter disregard with which skilled medical opinion is treated in the drafting of bills dealing with lunacy, rape, impotency, contagious diseases and the like.

BACILLI IN BUTTER.

IT is generally known that milk affords a dangerous vehicle for the dissemination of disease, but that this undesirable property is shared by butter is information at once of a novel and startling kind, and such as should put us on our guard. Yet, according to recent researches, there were contained in one gramme of butter (as much as would go on the point of a knife) 2,465,555 micro-organisms from the centre of the pat and as many as 47,250,000 on the outside. In fact, in some cases it is tolerably certain, it is stated, that the number of organisms swallowed with a moderately large piece of bread and butter may exceed that of the whole population of Europe. Butter kept in a refrigerator showed a marked reduction in the number of bacteria—a result which is also obtained by the addition of common salt. Samples of artificial butter, curiously enough, were invariably found to be much poorer in bacteria than ordinary butter; thus while the smallest number found in one gramme was 747,059, in real butter considerably over two million microbes was the minimum. Two varieties of bacilli have been isolated and described, and inasmuch as they were found to be constantly present in butter they were probably specific micro-organisms of a non-pathogenic character. But, at any rate, it seems clear that butter as well as milk is capable of carrying and fostering organisms, and on this account it behoves us, under certain circumstances, to melt our butter to boiling point in addition to boiling the milk. We must not, however, forget that nature, which has been so lavish in the production of bacteria, has probably fortified omnivorous man against many bacteriological dangers by the efficient antisepsis of a healthy digestion.

HORRORS OF THE COLD.

TERRIBLE accounts of suffering and death due to the prolonged low temperature come to us from the European continent. In Russia the mortality from sheer cold is greatly in excess of that reported for many years back, and even in her larger and more populous centres instances of frost bite, necessitating amputation of upper or lower extremities, are terribly frequent. In France the tale of "victims to the cold" is heavier and more harrowing than has been known for a generation, and cases have occurred which, while thrillingly pathetic in detail, may well excite wonder that the rigours of even so exceptionally severe a winter should have found her so unprepared. The sad death of the two little boys, chimney sweeps by occupation, who were found frozen to death at Châlons and locked in each other's arms to concentrate and keep alive what warmth they possessed, appeals to the pitying compassion of everyone. But the more than Siberian severity of the season has other horrors than those attributable to cold. Wild animals that shun the haunts of man have, under stress of hunger, thrown off their shyness, and in France and Austria we read of wolves attacking sheepfolds and even shepherds' huts. Worse still is reported from Hungary. At Keveres three women gathering wood for firing on the outskirts of a forest were attacked and devoured by wolves. From Servia comes the announcement that large packs of these animals have been hovering round Belgrade and the inland towns and villages, while companies of men armed with rifles were organised to kill them or keep them at bay. A priest who was travelling on horseback to Belgrade was overtaken and torn limb from limb by wolves. The same horrible fate befell a young girl near Pozarewatz. We are spared such concomitants of abnormally severe winters in the British Isles, and at the same time, with an equally low temperature, we are more fully prepared to meet the visitation. On the whole, our agricultural labourers and city artisans of the humbler grades are better off than the corresponding classes abroad; and even where their poverty and helplessness are extreme our organisations for their relief and rescue are superior. But this should not relax the efforts of the more favoured in the social order to minimise suffering and to introduce comfort wherever occasion for either presents itself. Such efforts should be maintained for the additional reason that, after meeting the local exigencies, there may be a surplus available for the charitable associations on the Continent, already more than taxed by the heavy demands on them of a yet more wretched and more suffering poor.

COLOUR-BLINDNESS.

AT a recent meeting of the Royal Society of Edinburgh Dr. Pole read an interesting paper on the "Present State of Knowledge and Opinion in regard to Colour-blindness," and the occasion was rendered the more interesting by the participation of Sir George Stokes in the subsequent discussion. The most common variety—the "red-green" form of colour-blindness—was alone discussed. To the colour-blind eye, it was asserted, the neutral point in the spectrum was of a grey colour, blue and yellow rays giving rise to that sensation and not to green. It was also argued from the fact that as the normal and colour-blind eye, as a rule, made the same matches of colours, that the colour sensations of the latter were the same in character and derivation as those of the former. The two dichromic colours Dr. Pole therefore maintained must be two known to the normal eye, and these he asserted to be blue and yellow, not blue and green, thus differing from Clerk Maxwell. He contended that the last phase of opinion on the subject had been the abandonment of Young's explanation of colour blindness, in which red and green were regarded as separate and contrasting colours. Sir George Stokes stated that Clerk Maxwell had merely chosen red, green and blue as representative colour sensations, and that Young's trichromic theory was not invalidated by his selection of particular colours. Sir George Stokes, who had been a member of the Colour Vision Committee of the Royal Society, stated that their object in publishing their chart was merely to give the public a general idea of the conclusions to be drawn from the trichromic theory and that he was afraid that their conclusions might be accepted for more than they were worth.

THE FRENCH REPRESENTATION AT THE INTERNATIONAL MEDICAL CONGRESS.

AN Italian correspondent writes:—"In Paris the Alleanza Latina has just held a banquet in honour of Dr. E. Maragliano, Professor of Clinical Medicine in the University of Genoa and Secretary to the Organising Committee of the International Medical Congress. To secure for that great meeting as numerous and influential a French representation as possible, and thus to prove that, whatever might be the divergencies of the two nationalities in *la haute politique*, there were none in the not less exalted sphere of science, was the motive of Professor Maragliano's presence in Paris.

a motive fraternally responded to by France, whose mouthpiece at the banquet in question was the senator Dr. Cornil, professor in the École Médicale. The company included many distinguished names in science, literature and art, Italian as well as French. After Professor Cornil had given the toast of the evening and touched on the many points of intimate, not to say family, contact between France and Italy, General Yung, the 'hero of Solferino,' dwelt on the marvellous progress the newly-emancipated kingdom had achieved; and, whilst relegating to the limbo of the impossible a fratricidal war between the two nations, he pointed to the paths along which they were destined to travel together for their mutual benefit and for that of mankind. Of these paths, medicine was pre-eminently one. Dr. Maragliano, speaking first in French and then in Italian, echoed the brotherly feelings expressed by General Yung, and having illustrated the community of genius and inspiration that binds the two peoples he claimed for the Alleanza Latina a supreme importance in extending and tightening those common ties about to be still further strengthened by the Congress which will meet a few months hence in Rome. In the course of the evening, which was a singularly harmonious one, it was announced that the French representation at the Congress would include M. Pasteur, Dr. Charcot and Dr. Brouardel, who, with others of their compatriots, will contribute materially to the success of the proceedings."

SMALL-POX IN SCOTLAND.

SMALL-POX continues to make headway in Scotland in spite of the very active efforts that are being made to prevent its extension. In Glasgow there were on Wednesday sixty-four cases in hospital, being a considerable increase on the previous week. The disease exists also in Greenock, Gourock, Coatbridge, Perthshire, Dumbartonshire and Ayrshire. In Glasgow the inmates of all the common lodging-houses are being revaccinated, and indeed revaccination is being carried on extensively in all the infected districts, and especially amongst the navvies, whose migratory habits have had already so much to do with the extension of the epidemic. One result of the outbreak is that rural local authorities, both of small burghs and of county districts, are being brought face to face with questions of hospital accommodation in a practical and pressing fashion of which hitherto they have had little or no experience. Hospitals hurriedly run up in the presence of existing disease are nearly always expensive and nearly always imperfect. But the combined cost of general revaccination and hospital accommodation will, at the very worst, be as nothing compared with the cost in life and in money of an extensive epidemic of small-pox such as is seriously threatening Scotland at the present time.

THE MEMORIAL TO SIR RICHARD OWEN.

A VERY notable gathering took place in the rooms of the Royal Society last Saturday to do honour to the memory of the late Sir Richard Owen, and to promote the commemoration of the services he rendered to science in the advancement of our knowledge of anatomy, zoology and palæontology. Many notabilities of the social world, with the leading naturalists and most distinguished men of science of this and other countries, were present. There is scarcely any branch of the whole of natural history that Sir Richard Owen—or Professor Owen, to use the title by which he was so long known to the world—had not touched and enriched by his investigations. His industry was enormous, and could only have been the result of a passionate love of the pursuits which occupied and dominated his mind. In the catalogue of the scientific papers of the Royal Society no less than 363 are to be found under his name. For quantity, general excellence and variety of work there was no one amongst the lights of biological science abroad who could be regarded as his superior. In his powers of classification, in his wonderful sagacity in interpretation and in his unwearied striving towards his ideals he was, as Professor Huxley pointed out, probably unrivalled. Nor must we forget that Professor Owen was a many-sided and practical as well as a genial man. He was not only the successor of Cuvier and of St. Hilaire and Oken, to whose schools Cuvier was strongly opposed, but he was an expounder of John Hunter and of the materials which he left in his museum, and had a firm grip of sanitary science and preventive medicine as well as a sagacious judgment as to what they were to become in the future. He declared that he did not forgive Moses, who was learned in all the wisdom of the Egyptians, for not having added an eleventh commandment to the Decalogue to the effect that "Thou shalt not pollute rivers." The proposal to found a memorial to Sir Richard Owen is most fitting, for he rendered great service to natural history and science, and so to the nation, and there could be no more appropriate place for a statue to him than the Natural History Museum, which he did so much to originate and to enrich.

SOUTH-WEST ENGLAND AS A WINTER RESORT.

DR. EDWYN SLADE-KING, medical officer of health of Ilfracombe, writes to us on the above subject. He claims for Ilfracombe great equability of temperature, moderate humidity and moderate rainfall, a slaty-rock soil and an abundant supply of pure soft water. He thinks it deserves more attention as a winter resort than it has yet received. We have quite recently entered into a comparison between the British and foreign resorts as winter quarters and cannot so soon reopen the question. The two classes of sanatoria stand on quite different bases and cannot be profitably compared with each other. We agree, however, with our correspondent that the tendency has been to undervalue the home resorts and that some of these possess great utility in certain cases. Ilfracombe is probably one of the best.

THE PERILS OF MEDICAL PRACTICE.

WE are able to give particulars concerning the death of Mr. H. M. Powell, M.R.C.S., which resulted from a wound received whilst engaged in a necropsy on a child who had died from tuberculous peritonitis. In conducting the investigation the virus, it appears, must have gained entrance through a "hang-nail" on his thumb. The wound was thought nothing of at first, but in about two days became painful and suppurated. The sheath of the long flexor tendon became involved and had to be opened in three places by his partner, Mr. Milne. The symptoms becoming more serious, Mr. Howse was telegraphed for. He found a diffused flat painful area in the lower third of the forearm, which it was thought must contain pus. Chloroform was accordingly given and two incisions, one on either side, were made. A considerable quantity of pus, held down under the deep flexors, was evacuated, and the cavity drained. No bone was at that time bare. Mr. Powell appeared to be better till the following Tuesday, when a little hæmorrhage came on from the radial side of the forearm. This was stopped by pressure but recurred several times, and on the Thursday following Mr. Milne telegraphed to Mr. Howse to see the patient a second time, but he was unable to go that day. Mr. Hamilton therefore tied the radial artery a little above the wound (the hæmorrhage came from the proximal end of the artery). The septic clots were also thoroughly cleared away and the wound washed out with perchloride of mercury solution. But the patient had then lost much blood. On Saturday night Mr. Howse had an urgent message to see him again on account of hæmorrhage occurring—this time from the ulnar artery. It was found

that Mr. Powell had not lost more than an ounce of blood; he was, however, deeply infected with the septic poison, with a pulse of 140, and the skin of a yellowish hue. As the difficulty of doing anything in his house was considerable and the bleeding showed no signs of recurrence, Mr. Howse advised that he should be removed to a private ward in Guy's Hospital early the following morning. This was done with very little trouble to the patient. On the same morning (Sunday last) his condition was thoroughly explored under ether. Both bones were now bare and the sloughing process had extended considerably. A suspicion of emphysematous crackling was also present. The arm was accordingly immediately amputated above the elbow. He recovered well from the anæsthetic, having lost very little blood during the operation. The following morning (Monday), about 2 P.M., sudden dyspnœa came on and he died in about twenty minutes, probably from some extension of septic thrombus to the right side of the heart and to the lung.

THE IMPORTANCE OF ANTISEPSIS IN DENTAL SURGERY.

THIS subject, which can hardly be too often brought under notice, is ably discussed by Dr. Miller of Berlin in the current number of the *Dental Cosmos*. The hands of the operator, just as with a surgeon, should be thoroughly cleansed, especial attention being paid to the nails. With regard to instruments, particularly forceps and excavators, he maintains that absolute sterilization should be demanded inasmuch as infectious matter is much more readily communicated by them than by the fingers, and further because the sterilization is so easily accomplished that there is no excuse whatever for neglecting it. The method of sterilizing instruments now most commonly in use is by means of boiling water containing one or two per cent. of carbonate of soda to prevent rusting, but personally he prefers to add carbolic acid, lysol, or trichlorphenol. To carry this out, two sets of instruments are necessarily required. Dr. Miller further mentions mouth mirrors and drinking glasses as being liable to convey infection.

THE POLLUTION OF THE DEARNE AND DOVE.

AN important conference of sanitary authorities has been held at Barnsley, at the instance of the West Riding County Council, to consider the question of the pollution of the Dearne and Dove. The meeting was presided over by the chairman of the County Council (Mr. Dent-Dent), who was supported by various members of the Council and by Dr. Whitelegge, medical officer of the county. The chairman recalled to the minds of his hearers the condition of the Dearne and Dove before these rivers were polluted, and he stated that the Dearne was more or less polluted from its commencement; only when it reached Barnsley was any serious attempt made to purify the sewage. In many instances the pollution, so far as domestic sewage was concerned, arose from detached houses and villages. He pointed out the powers given under the various Acts to County Councils and stated there was no desire to hurry unreasonably in these matters. A resolution was adopted to the effect that the present pollution of the rivers is a danger to the public health, and that the Conference appealed to all sanitary authorities and to all manufacturers and others draining into the rivers to take every means in their power to cleanse and prevent the further pollution of the rivers. The second resolution, proposed by the Mayor of Barnsley, Mr. Halton, L.R.C.P.I., called on the sanitary authorities to take steps to exclude from the rivers all domestic sewage until it had been purified, and a third resolution expressed an opinion in favour of the formation of combined drainage districts. These resolutions were adopted. In conclusion, the Chairman read the declaration of the County Council, in which the Council expressed its determination to require the sanitary authorities within a limited period to adopt measures for the prevention of the pollution of these rivers. There is every reason to regard this decision with satisfaction; and it may be anticipated that the County Council will be supported by public opinion in enforcing these reasonable requirements. The more willing authorities will no doubt proceed at once to take the steps which are necessary to prevent the pollution of these rivers, and the task of the County Council in dealing with the more negligent will then be accomplished with less difficulty.

ATHLETICS IN AID OF HOSPITALS.

WE congratulate the athletic world on the possession of something like a true sense of its relation to the medical profession. A proof of this rational temper is afforded by the institution of two meetings to be devoted to cycling and other forms of athletic sport, the proceeds of which are to be given in aid of the London hospitals. The liberality thus indicated recalls the memory of another similar kindness. We had occasion a few weeks ago to notice the grateful and graceful munificence of a well-known vocalist who commemorated the preservation of her voice, if not also of her life, by a liberal donation to a hospital. Allied in its thoughtful courtesy is this new movement amongst the exponents of physical doctrine. This class as much as any owes its quota to the art which cares for the strained sinew and the broken limb and which guides, though unobtrusively, the whole order of bodily exercise. The boards of hospitals in their day of need will, we may rest assured, not be wanting in appreciation of the good feeling shown in this matter by these unexpected though not untimely friends.

THE INDIAN LEPROSY COMMISSION.

THE question has been asked in more than one quarter lately as to what has become of the report of this Commission. It is two years since it was sent out to India. The Commission arrived early in 1891 and went at once to the leper district of Kumaon in the North-West Provinces, and before the end of that year their work was finished and their report had been handed in to the Indian Government, but nothing has been heard of it since. Two members of the Commission—the late Surgeon-Major Barclay, I.M.S., and Dr. Kanthack—are said to have succeeded in isolating the bacillus of leprosy and in cultivating it in artificial media, and subsequently in having produced leprous nodules in a rabbit by inoculation with the cultivated bacilli. It is at least more than a year since the report was put into the hands of the Government printers at Calcutta. The general tenour of the report appears to be known, but its publication has been anticipated for some time and should be no longer delayed.

A PRIZE ESSAY IN PUBLIC HEALTH.

M. JOSEPH KÖRÖSI, of the Statistical Bureau of Budapest, has established a prize of 1500 francs, which will be awarded to the author of the best work on the Aim and Progress of Demography. The author must state the scientific task of demography and criticise the different ruling theories and the more important demographical work which has been accomplished during the last fifty years in the chief countries of Europe and in the United States of America. He should then deal chiefly with the development of the Census and the progress of birth and death statistics by showing where, when and by whom these branches of demographical science have been perfected. The work may be written in German, English, French or Italian. It should be sent, without any indication revealing the name of the author, before March 1st, 1894, to M. Joseph Körösi at Budapest. The author must send his name in a sealed envelope attached to the packet containing his essay. The works of com-

petitors will be examined by members of the committee mentioned below. In accordance with the vote of this jury the prize will be awarded at the general meeting at the opening of the Congress at Budapest, to the author whose work has the greatest absolute value. The jury consists of the following members: Dr. Jacques Bertillon, Director of Statistics of the city of Paris; M. Luigi Bodio, Director-General of Statistics in Italy, and Secretary-General of the International Institute of Statistics; Dr. V. von John, Professor at the University of Innsbruck; M. Joseph Körösi, Director of the Statistical Bureau of Budapest; Dr. W. Lexis, Vice-President of the International Institute of Statistics, and Professor at Göttingen, and Dr. W. Ogle of the Registrar-General's Office for Births, Deaths and Marriages in London.

CHOLERA PRECAUTIONS.

IN connexion with the measures which became necessary to guard against the introduction of cholera during the present year we learn that special inquiries are being held at certain ports by the Local Government Board. Dr. Barry and Mr. Jenner-Fust have been holding public inquiries as to the constitution of the Liverpool, Runcorn and other Mersey ports, and Mr. T. W. Thompson, of the Medical Department, together with Lord Courtenay and Mr. Longe, general inspectors of the Board, have been holding similar inquiries at Bristol, Gloucester and in the Bristol Channel.

NOTIFICATION IN LEEDS.

AT the fifth annual meeting of the National Association of Sanitary Inspectors, which has just been held, the subject of notification of infectious disease in Leeds was discussed. The Mayor, who presided, stated that he hoped the time was not far distant when the Notification Act would be in operation in the district, and he was supported by Mr. Pridgin Teale, who pointed out the disadvantage in which the town would be placed in the presence of small-pox or cholera without the assistance which this Act would give. For our own part, it is matter of surprise to us that an energetic north-country community like Leeds should not already have provided itself with this important machinery for protecting the public against disease. Whatever feelings of apprehension communities may have had in the past as to the working of the Act have been shown to be groundless, and it is now generally recognised by those who have had experience of its working that, without unduly interfering with personal rights, it is of material aid in preventing the extension of disease. We trust, in the interest of the Leeds public, that they will not be long without the protection it affords.

MEDICAL CERTIFICATES FOR CIVIL SERVANTS.

A RECENT order by the Civil Service Commissioners provides that in the event of retirement of any civil servant below the age of sixty years a medical certificate shall be required to show either mental or physical incapacity for duty. This official sanction may of course be granted by any qualified practitioner, but it is to be open also to inspection by medical inspectors appointed by the Commissioners. If properly worked this arrangement is one which ought to prove satisfactory, and no possible objection can be raised even to the appointment of an official scrutineer. There need be no fear lest the creation of this new functionary should prove detrimental to the just interests of the visiting practitioner. It would indeed be matter for regret if it were otherwise. Independent medical testimony is what is required in this case, and there cannot obviously be any real independence unless the certifier be accepted by the authorities, even though untrammelled by Government connexions. His position, like that of a tribune of the plebs, is indispensable to private liberty. The supervision of his statements provides an adequate safeguard on the other side, and this also is at all events technically indispensable. It is to be hoped, however, that the powers vested in the newly appointed officers, of whom there will be one in each of the three kingdoms, will be used in no vexatious or meddlesome spirit. Certificates of the kind, by whomsoever given, may as a rule be relied upon and the Commissioners will show their wisdom by recognising this. We would only suggest in addition the advantage in point of accuracy which must result if the needful details are expressed upon forms regularly prepared for this purpose.

THE LONDON COUNTY COUNCIL LODGING-HOUSE.

THE London County Council formally inspected on Wednesday last the lodging-house which they have had erected in Parker-street, Drury-lane. The occasion for the Council to embark on this enterprise was afforded by the demolition of seven common lodging-houses in carrying out the improvement scheme in this locality. The contract for the building was £14,300, the furnishing cost £1250 and the site has been estimated at £3700, which, with the architect's commission &c., makes a total cost of £20,350. It is estimated that an income of £2450 is required to make a return of 3 per cent. and to provide a sinking fund which would replace the cost of building in eighty years. To meet this the Council have fixed the charge per bed at 5*d*. per night, and, seeing that each inmate is provided with a separate cubicle and has the use of an excellent kitchen and reading-room, this charge is a very reasonable one. We understand that the building will be first occupied to-night (Saturday).

IS A SMALL-POX HOSPITAL A NUISANCE?

IN the Chancery Division of the High Court of Justice Mr. Justice Chitty has given a decision of no ordinary interest in the action taken by the Withington Local Board to prevent the Corporation of Manchester from erecting a temporary small-pox hospital within the district of the former. It is not necessary for us to enter at length into the particulars of the case, as the issue resolved itself into the question whether the erection of a small-pox hospital and the treatment of patients therein came within the meaning of the term "a noxious business," as understood in law. The plaintiffs' counsel contended that it had been held that a hospital the patients of which made small payments according to their means was a "business," and that, as it could not possibly be conducted so as to secure for its neighbourhood absolute protection against infection, it was a "noxious business." The defendants' counsel, on the other hand, maintained that if his clients could not, without the consent of the plaintiffs, send patients to a district within the jurisdiction of the latter, neither could they, without the consent of the Manchester Corporation, send patients to the already existing hospital in that city. He contended also that scientific views of infection, however valuable, were without cogency on the present occasion. Mr. Justice Chitty stated that the point for his immediate consideration was whether the establishment of a small-pox hospital was a noxious or offensive trade or business such as required the consent of local authorities for its erection and use. He argued that to be so such a business or trade must itself be of a noxious or offensive character *and analogous to those specified*. He maintained that a small-pox hospital was not analogous to these and decided on that point against the plaintiffs. On the point—which he considered a very important one—whether by Section 285 of the Public Health Act, 1875, the consent of the local authority of the adjoining district was required before a hospital could be provided for their own patients he reserved judgment.

Pending the decision of the Court the defendants agreed not to use the hospital. But science, whose voice, one of the lawyers in the case stated, has no cogency in determining whether institutions for the reception of infectious cases are noxious in the sense that "brick burning" "fish frying," "blood boiling," and what not, are offensive or noxious, is surely, if slowly, laying the lasting foundations upon which law and all else should be based. It is, however, probable that, if a locality has a self-governing power and chooses to exert it, the immediate neighbourhood of infectious disease—preventable like small-pox by efficient vaccination, or unpreventable like typhus fever—will be considered by them as objectionable as the propinquity of some trades and businesses which would be deemed "nuisances" at law The question is not without its difficulties.

MR. GLADSTONE'S HEALTH.

IN view of recent rumours and somewhat sensational accounts which have been widely circulated we are glad to be in a position to state that the Premier is in the enjoyment of as perfect health as is possible for any man who has reached the great age of eighty-three years.

SIR JOSEPH FAYRER.

SIR JOSEPH FAYRER, who has recently been seriously ill from an acute attack of pulmonary disease, is, we are glad to learn, much better and doing well, so that we may soon hope to hear he is able to return to his duties.

FINE FOR NON-NOTIFICATION OF SMALL-POX.

MR. PATRICK DONELLAN, L.R.C.P. and L.R.C.S. Edin., of St. Helens, was on the 23rd inst. charged before the police magistrates for failing to notify in four cases of small-pox. The notifications were not made till one of the patients, the father of two of the others and the brother of a third, was dead. All the cases had lasted sufficiently long and were obvious enough to admit of no excuse as respects diagnosis. To do Mr. Donellan justice, his legal adviser admitted the facts. The cases occurred in the premises of a milkseller and cowkeeper, and the non-notification seems to have had for its motive a very mistaken notion of kindness and consideration for the business of the poor man whose case occurred long after the others. The Bench decided that Mr. Donellan should pay a fine of £2 and costs in each of the four cases—in all about £25. We are informed that it is impossible to say what further extensions of mischief may result. We deeply regret that Mr. Donellan should have laid himself open to so severe a penalty.

WILLIAM PRICE, M.R.C.S. Eng., L.S.A., the well-known Welsh Druid, died at his residence, Llantrisant, Glamorganshire, on the 23rd inst., at the great age of ninety-two. Mr. Price has expressly stipulated in his will that his body should be cremated on the top of the mountain near his residence. The magistrates of the division have held a meeting with regard to the matter, but are not likely, we understand, to interfere.

WE regret to have to announce the death, on Saturday last, at the great age of eighty-eight years, of Joseph Anderson, M.D., L.R.C.S.Ed. He obtained his doctorate in 1826, and retired from professional work many years ago; but almost to the last he took an active interest in the local affairs of Liverpool, where he lived and died.

IN the Randolph Hall of the University of Glasgow to-day (Saturday) Professor Gairdner's portrait will be presented to that University. A replica will also be given to his family.

HER MAJESTY THE QUEEN has granted to Henry Pottinger Keatinge, M.B., M.R.C.S., licence to accept and wear the Insignia of the Order of the Medjidieh of the Third Class in recognition of his services in Egypt.

DR. ALFRED HARDY, for many years professor of dermatology at St. Louis Hospital, and a practitioner of high repute, died last week in Paris. He was born at Paris in 1811 and entered the Academy of Medicine in 1867.

THE Vice-Chancellor has appointed Mr. Michael Foster, M.A., F.R.S., Fellow of Trinity College, Cambridge, and Professor of Physiology, to the office of Reader on Sir Robert Rede's foundation for the year 1893.

AT the Society of Arts, on Wednesday, Feb. 1st, Mr. William Key will deliver a lecture on the Purification of the Air-supply to Public Buildings and Dwellings.

CHOLERA.

CURRENT NOTES, COMMENTS AND CRITICISM.

SINCE our last report bacteriological investigations have, according to an official bulletin published at Hamburg on the 18th inst., proved the existence of cholera in the case of three more African seamen of the Hamburg steamer *Gretchen Bohlen*. It seems to be hard to get at the truth in regard to the alleged cases of cholera on board the *Murciano*. The Liverpool agents for the company to which that steamer belongs now write to say that the death of the fireman was not from cholera; that the man had been in delicate health for some months with a pulmonary disease and that his death was attributable to an aggravation of this from the intense cold; moreover, that all the other patients alleged to have been suffering from cholera were now in perfect health, and had not exhibited any choleraic symptoms, and that the statements regarding the filthy condition of the ship were without foundation. As regards the very serious outbreak of cholera at the Nietleben Asylum, near Halle, we shall consider that separately; but at Budapest the Minister of the Interior stated on the 23rd inst. that there is no cholera epidemic whatever in Hungary at the present time in the opinion of the National Sanitary Council; there had been nothing more than a few cases of a sporadic nature for some time past. As regards Russia intelligence from St. Petersburg announces that, notwithstanding the extreme cold, fourteen cases of cholera had been registered in different localities of the province, some of which had had a fatal issue. So far, therefore, the total amount of disease prevailing at present is small considering the large extent of territory the epidemic has occupied and the great number of inhabitants. But attention has been focussed upon the serious and remarkable outbreak of cholera in the Nietleben Lunatic Asylum near Halle; and the facts, so far as they are at present known, are certainly well worthy of attention. The asylum contains about 700 patients. The first case occurred on Saturday, the 14th inst. The total number of cases up to the present has amounted to 105, of which upwards of 36 have proved fatal. The first patient attacked died and this case was quickly followed by other attacks and deaths, but it was not until the lapse of four days from the occurrence of the first case that the exact nature of the disease was determined bacteriologically by the discovery of comma bacilli in the excreta. How the disease originated in the asylum has not been traced. It is a comparatively isolated place, but not so much so as it was in 1866 when cholera, according to Professor Rudolph Arndt, also broke out in this same asylum at Nietleben. It is conjectured, and it is but a conjecture, that the infection was introduced into the asylum on the present occasion by an attendant who was engaged from Hamburg some three months ago. The water supplied to the asylum was obtained from the river Saale and it is supposed to be impure; at any rate, to avoid any further risks from that source, the water-supply for the asylum has been changed and it is now drawn daily from the river Elster at the

instigation, it is believed, of Professor Koch, who, with other *savants* and Government officials, has minutely inspected the asylum and inquired into all the facts connected with the medical history of the outbreak. The town of Halle and the village of Nietleben were quite free from the disease. An outbreak of cholera has since been reported at a workmen's lodging-house at Trotha and some of those attacked are stated to have drunk Saale water. We do not yet know, of course, all the facts connected with the sanitary condition of the asylum at Nietleben; but the outbreak appears to be parallel to that which happened at Laufen in 1873 and in November last at a home kept by the Sisters of the Poor at Breteuil in Paris, and still more so with that which occurred in April last at the prison and hospital at Nanterre, near Paris, where there were altogether 4000 persons accommodated in buildings intended for half that number and, in addition to other insanitary influences, the water supplied to the institution was obtained from the impure source of the Seine. In two weeks there were 51 cases and 49 deaths from cholera at Nanterre, where the appalling rate of mortality of 98 per cent. served to indicate how virulent the disease becomes when overcrowding, bad air, bad water and bad food are present. The question which at present, however, confronts us is, how did the cholera-cause get into the Nietleben Asylum, or how was the comma bacillus introduced into the Saale River water, assuming the water to have been the true cause of the disease? Was that source of water-supply limited and peculiar to that institution, or was it the general water-supply common to the whole neighbourhood, and if so, has any form of choleraic disease made its appearance elsewhere amongst those who have used it? We know now that water from the Saale river was used throughout the municipal district and in the Saale and Mansfeld districts as well as at Nietleben, but what seems more important is the information, previously concealed, that several cases of acute diarrhœa and vomiting—so-called cholera nostras—had occurred in this asylum during the autumn of last year. No one who has had experience of the way in which cholera comports itself can doubt that there most probably exists a connexion between those occurrences and the present outbreak, of which they were the antecedents and precursors and to which they afford a clue. The disease was apparently already there and its recent introduction by specifically infected water is consequently not necessarily required in explanation. It must be remembered that lunatic asylums and hospitals are very liable to localise the disease and occasionally to be the first places attacked in times of cholera epidemic. The explanation appears to be connected with the continuous nature of their occupation by their inmates and the presence of a common atmosphere laden with organic impurities and moisture, with the additional evils of overcrowding and defective ventilation. In the case of lunatics, moreover, they are generally more or less enfeebled persons with weak or defective circulations and prone to disease. The Lahore Lunatic Asylum, for example, suffered out of all proportion to any other community in the epidemic in 1867 and in the two succeeding Indian epidemics.

Had it been possible to have evacuated all the buildings at Nietleben last autumn and to have subjected them to a thorough cleansing and to the freest ventilation and disinfection for a week or two before their reoccupation, it is quite possible that the present outbreak might have been averted. Of course the difficulties in the case of providing for lunatics must always be great and sometimes insuperable, but the best course would have been to have promptly emptied the asylum of all its inmates on the occurrence of the first cases of cholera this month and to have accommodated them elsewhere for a time. This practice is pursued in India, and it is founded upon a large and repeated experience of its good effects—in fact, it frequently seems to put an end to an outbreak of cholera when no other measure has any beneficial effect. Unfortunately it is difficult to provide for the accommodation of lunatics at any time, and especially at this season of the year when people cannot be encamped. It may be useful here to say that an outbreak of this kind occasionally terminates abruptly in 9 days, as typified in many examples in India. Assuming that there is no re-infection or any local cause for the persistence of the disease, an outbreak in an Indian gaol lasts about 16 or 17, or occasionally 21, days—or more if the occupants are not cleared out and encamped. An outbreak on board native boats in India lasts 16 or 17 days, and among troops on the march the disease generally rises to a maximum within the first five days and parts with its virulence, as a rule, in 9 days. In the case of a particular body of troops or men in which the disease has lasted for a certain time—say from 8 to 21 days—the outbreak will have probably then terminated, but renewed outbreaks may occur from occupation of the same site or by moving from one infected locality to another. Dispersion, as opposed to aggregation, is a golden rule to be remembered in times of epidemic cholera; the risk of attack and the extent of the spread of the disease increase in a geometrical ratio according to the measure of overcrowding and the number of occupants breathing a common atmosphere. The localisation of cholera is one of its most remarkable characteristics. Drs. Baly and Gull, in their report published in 1854, remarked that of all the characters to which they were referring the most obvious one was the unequal and very partial distribution of the epidemic. "Cholera left whole districts unvisited and fell severely on comparatively few localities. The unequal distribution of the cholera epidemic is manifest whether Europe is regarded as a whole or whether attention is confined to this country or even to a single town or a single public institution." These remarks are as true and as applicable to the present time as they were at the date when they were written. And these local circumscribed outbreaks occurring out of due season in winter and early spring are frequently most significant if regarded aright, as showing, in the first place, that the epidemic is not dead, and, in the second place, as indications of its probable revitalisation and advance under favouring conditions later on.

Professor Pettenkofer has written to say that for him the cholera outbreak at Nietleben is nothing new. It reminds him in every way of the outbreak at the prison of Laufen, in Bavaria, at the end of 1873, when out of 522 inmates 83 died of cholera within three weeks, without anyone being able to discover how the disease was introduced. That epidemic died out, as such epidemics generally do, in a very short time, without spreading to the town of Laufen. He regards such cases as these at Laufen and Nietleben as of great interest from an epidemiological point of view. Professor Peter of the Necker Hospital, Paris, who regards cholera nostras and Indian cholera as for all practical purposes one and the same malady, would no doubt look upon the Nietleben outbreak as a sort of involuntary experimental pathology—in the local manufacture, as it were, of cholera, by showing how a series of morbid troubles can increase and become a local epidemic under the fostering influences of overcrowding, bad water and food and bad air.

The organ of the Austrian Supreme Sanitary Council has published particulars, based on official data, of the appearance and spread of cholera, as well as of the preventive measures adopted in Austro-Hungary, during the past year. The epidemic does not appear to have been very extensive or severe. The total number of cholera cases in the Empire was 214 and of deaths 125, of which no less than 207 cases and 119 deaths occurred in Galicia. The account shows that the disease followed the course of the rivers. It is stated to have entered Western Galicia by way of the Vistula and Eastern Galicia by the river Zbruck, and in Hungary to have followed the course of the Danube and its affluents. The report, according to the account of it in *The Times*, agrees with most European observers that the excretions of cholera patients are the chief means of infection and that "the destruction of the seeds of the disease and the prevention of their propagation must be effected by restricting as far as possible the soil that matures the cholera germs"—by which we understand that sanitation and cleanliness in their extended as well as in their particular and restricted sense must be rigorously followed out.

As regards our own country, an inquiry was recently held at the Town Hall, Liverpool, by inspectors of the Local Government Board, as to the port sanitary arrangements of the Mersey in view of the possible outbreak of cholera and other subjects, which led to long and interesting discussions, but the inquiry was adjourned to the 30th instant.

Whilst Continental Governments are occupying themselves with armaments and war rumours, and our own politicians are making ready for the political strife of what promises to be an exciting session of Parliament, there is cholera at Halle and Hamburg and on the Danube and Vistula confronting us, and threatening to continue its further progress later on; all public health measures, though, unfortunately, they may have to give way to considerations which are short-sightedly deemed to be more pressing, are, we would venture to insist, of no little importance at the present time.

CONFERENCE ON METROPOLITAN HOSPITALS.

AT a meeting held in the Board Room of the London School Board at their offices, Victoria Embankment, on Tuesday last, the special committee, which had been appointed at the conference held last year at Spencer House on July 22nd, presented their report. The matter which had been referred to the special committee was the consideration of the conclusions arrived at by the Lords' Committee on Metropolitan Medical Relief. It was considered that the salient point in that report was the formation of a central body of some description, and they appointed a special committee to deal with this portion of the subject.

The subcommittee consisted of Lord Sandhurst, Sir Andrew Clark, Mr. Diggle, and Mr. Burdett. The special committee adopted the subcommittee's report and resolved that it should be laid before the reassembled conference.

The following is the report of the special committee. The subcommittee was appointed on Nov. 2nd, under the following resolutions :—

"That it is desirable, should it hereafter prove practicable to do so, to form a Central Board for the Medical Charities of London," and "that a subcommittee be appointed to prepare a scheme for discussion at the next meeting of this committee."

I. That they consider that it is practicable to form a Central Hospitals Board in the spirit of the recommendation of the Lords' Committee.

II. That they have taken into their consideration the subject of the constitution of such a Board, and beg to make the following suggestions :—

(*a*) It is suggested that the basis of the representation upon the Board should be the Committees of Distribution of the Hospital Sunday and Saturday Funds. The latter Committee numbers fourteen members, and it is suggested that the Hospital Sunday Fund should be asked to add four members of their Council to the ten members of their Distribution Committee, so as to bring up the number of their representatives to fourteen.

(*b*) It is further suggested that the representatives of the hospitals and dispensaries should be equal in number to those of the two funds combined—viz., twenty-eight.

The committee have considered in what manner it would be practicable to obtain a thorough representation of these institutions.

1. They recommend that each of the twelve endowed and general hospitals with medical schools should nominate one representative each.

2. That any other hospital not included in Section 1, but which has had a daily average of 150 beds occupied during the previous year, should nominate one representative each. At present five hospitals fall within this qualification.

3. The remaining representatives should be elected by the medical charities participating in grants from the Hospital Sunday and Hospital Saturday Funds, upon the following basis, viz., each institution to be entitled to one vote for every £100, or part thereof, granted by the Distribution Committees of the Hospital Sunday and Saturday Funds. At a given date, a notice would be issued to the institutions concerned, asking for the names, to be sent in within a given period, of persons nominated to serve as representatives. The names so sent in, with those of their proposers and seconders, would be printed upon a voting paper, and would be sent round to the various institutions with a statement showing to how many votes the institution was entitled. Each institution would be then entitled to vote in order of preference for any of the candidates nominated, and the candidate receiving the highest number of votes would be the elected representative.

(*c*) The subcommittee further suggested that each of the following eight bodies should be entitled to send one representative—viz., Royal College of Physicians, Royal College of Surgeons, the General Medical Council, Society of Apothecaries, General Practitioners, University of London, London County Council, and the Metropolitan Asylums Board.

The Board would therefore be composed as follows: Hospital Sunday Fund, 14; Hospital Saturday Fund, 14; Hospitals and Dispensaries, 8; Royal College of Physicians, 1; Royal College of Surgeons, 1; General Medical Council, 1; Society of Apothecaries, 1; General Practitioners, 1; University of London, 1; London County Council, 1; Metropolitan Asylums Board, 1; making in all 64 representatives.

III. The subcommittee have further considered what the functions of the Central Board should be. Upon this question they venture to point out that under the scheme thus indicated no attempt would be made to administer the affairs of any hospital. It would also leave the Hospital Sunday Fund and the Hospital Saturday Fund in the same position that they now occupy as regards constitution, collection and distribution of funds. But it would give to these funds the advantage of being brought into direct contact with the best medical ability and with the best representatives of the active workers connected with the several institutions and with public bodies, and would tend in this way to a more complete understanding of the whole of the conditions under which the work of voluntary hospitals is performed, and the best means of supplying defects and initiating reforms.

IV. If the scheme thus foreshadowed should come into active existence, it might ultimately provide a common centre from which both the Hospital Sunday Fund and the Hospital Saturday Fund might conduct their operations, and at which provision might be made for the collection, in an easily accessible form, of information connected with the working of the medical charities of London and elsewhere. The advantages of such a centre of information and work are so obvious that they need no further elaboration.

V. The subcommittee have also considered the name of the proposed central body, as suggested by the Lords' Committee, and although they have not arrived at any definite conclusion they desire to place the following before the General Committee—viz., the London Central Hospital Board, the London Association of Hospitals, the London Association of Medical Charities.

(Signed) SANDHURST, Chairman,
JOSEPH R. DIGGLE,
ANDREW CLARK.
HENRY C. BURDETT,
SYDNEY H. WATERLOW.

Amongst those present were the following :—Lord Cork, Sir Douglas Galton, Dr. Sturgess, Rev. Dr. Troutbeck, Mr. Diggle, Mr. H. H. Tooth, Mr. F. Villiers, Mr. Arthur Lucas, Mr. H. Lucas, Mr. J. P. Beckwith, Mr. E. M. Ind, Mr. J. Wainwright, Mr. F. W. Hunt, Mr. G. F. Sheppard, Mr. Holmes, Mr. Acland, Mr. H. M. Macpherson, Mr. Hale, Mr. J. Mosse, Mr. B. Martin, Mr. Harrold and Mr. Bousfield.

Lord SANDHURST, in moving the adoption of the report, said he thought that they who represented the larger class of medical charities in London were the right people to take the lead in considering the report of the House of Lords. The governors of hospitals were the persons who bore the responsibility, and he had accordingly requested their attendance at this conference. No well-ordered institution, he said, need be in fear of any interference ; at the same time if there were anything wrong about these institutions it was only right and proper that pressure should be brought to bear upon them from outside. With regard to the suggestion that the duties of the proposed body were far too wide, he said the committee had long considered the point and had come to the conclusion that they would more easily invite the coöperation of the medical authorities if they did not lay down any such stringent rule as this, that they should do this and that duty. The committee also considered that, supposing such a body were formed, as it grew in public esteem it would be easy to map out its duties.

Sir DOUGLAS GALTON said that, in his opinion, the Hospital Sunday and Saturday Funds had a great deal too much power given to them by the suggestions of this report. He objected to the constitution of the committee suggested and also to the appointment of an influential committee without a clear definition of the duties it was to undertake. His objections were based on the fact that the Central Board suggested by the Lords' Committee was to be a representative board, on which the different bodies who sent delegates would possess a degree of influence corresponding to some uniform standard. But the committee had recommended that the two Councils of the Hospital Sunday and Saturday Funds should form the principal part of the board. These two bodies together would send twenty-eight representatives ; whilst it was proposed that the whole of the hospitals together should only be represented by an equal number. He therefore greatly objected to the preponderance of numbers which these two bodies would have and moved the following amendment : "That the report be referred back to the committee with a request that they will propose a scheme having a representative basis more in accordance with the report of the Lords' Committee than the scheme which they have submitted ; and that they will report fully on the duties and powers of the proposed board."

The amendment was seconded by Mr. BOUSFIELD.

After some remarks from Mr. DIGGLE, in which he said there seemed to be a feeling of jealousy of the Hospital Saturday and Sunday Funds, as well as from Mr. ACLAND and others, the amendment was carried by 18 to 3.

Mr. ACLAND said it seemed to him a waste of time for the subcommittee to hold a number of additional meetings if the Conference would not accept the principle of a Central Board.

On the suggestion of Mr. DIGGLE, the subcommittee was augmented by the addition of several gentlemen present.

The proceedings then terminated.

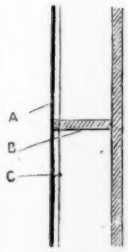
DUNDEE EYE INSTITUTION.—Great and increasing work is being done by this institution. Double the number of cases during the past year had come forward for treatment since the new premises were opened. The report for the year showed : Remaining on list, June 30th, 1891, 39 ; admitted during the year ending June 30th, 1892, 593—total 632 ; dismissed cured, 361 ; dismissed improved, 73 ; dismissed relieved, 40 ; dismissed with advice, 100—574 ; remaining under treatment, June 30th, 1892, 58 ; total since commencement, 21,611.

PERMANENT AND PORTABLE IRON HOSPITALS.

AMONGST the numerous subjects with which sanitary science is concerned probably none occupies a more important share of the attention, both of the public and of the medical profession, than the treatment and prevention of infectious disease. In dealing with diseases of this class it is not sufficient for a medical man to pilot his patient safely back to a normal state of health, but an equally grave responsibility rests upon him—viz., that of preventing his patient becoming a source of infection to others. So fully has this responsibility been recognised that it has now become obligatory upon medical men to notify to local authorities cases of infectious disease which they may be called upon to treat in their daily practice. It is evident that in adopting a system of notification sanitary authorities have in view two objects: (1) of being furnished with an accurate record of the nature and amount of infectious disease prevalent at any definite time in their district; (2) of ensuring that means shall be taken to limit the spread of such cases in their locality. In order that local authorities may exercise an effectual check over the diffusion of infectious diseases power is granted them by the Public Health Act, 1875, and the Public Health (London) Act, 1891, either to erect hospitals for such cases or to obtain the use of such hospitals for patients resident in their district, to which they may be removed by the order of the medical officer of health or on the certificate of a medical practitioner. It is to be regretted, however, that sanitary authorities have not utilised the power with which they have been invested to a sufficient extent, and examples have recently arisen where the neglect to do so has reduced the local authority to awkward straits. Moreover, even though the sanitary authorities have taken the precaution to provide an isolation hospital, should the district be overtaken by the misfortune of a serious epidemic, such as London passed through last year or such as we are now threatened with, in the shape of small-pox and cholera, it may become imperative for the local authority to provide accommodation for an extra number of patients with only a very brief notice.

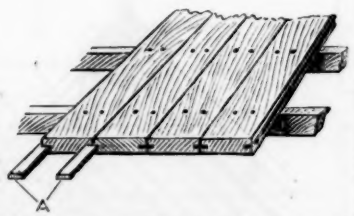
Whilst the necessity of being prepared with the means of isolating infectious diseases cannot be denied, the nature of the cases to be treated and the merely temporary use to which hospitals for the reception of patients suffering from infectious disorders are oftentimes put have rendered both the plan on which these structures should be built and the best materials to be employed in erecting them matters of dispute. The older forms of blocks of buildings arranged in squares or rectangles are manifestly objectionable, as they permit neither the free play of sunlight nor the thorough circulation of air. The plans which now find most favour are separate huts or one-storeyed pavilions; but as ground is usually an important consideration the latter is the form by far the most frequently adopted. The material employed for building permanent hospitals has up to the present been some variety of stone, and for temporary structures in epidemic times galvanised iron, wood and other materials have been used. The large expenditure necessary for the erection of a stone building but too frequently proves a deterrent to local authorities providing themselves with suitable isolation hospital accommodation. Considerations of cost and the occasional compulsory abandonment of stone buildings for the isolation of infectious diseases owing to the extension of neighbourhoods suggested to Mr. Humphreys, of Knightsbridge, London, the possibility of building such hospitals of galvanised iron—a material which, while making a fairly permanent structure, would also admit of the latter being bodily removed and transferred to a fresh site, should occasion ever arise. Hospitals erected under this system become the sole property of the corporation, even in the event of the latter not possessing the freehold of the site. The

FIG. 1.



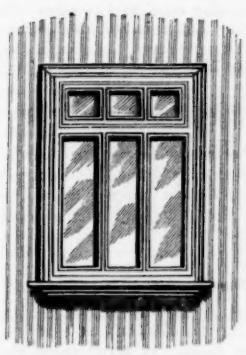
Matchboard. Diagram of vertical section through the wall. A, Iron. B, Frame. C, Felt.

FIG. 2.



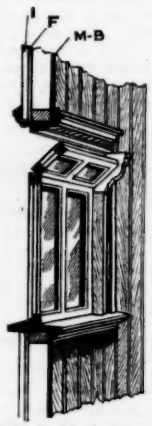
View showing method of fixing iron tongues in flooring. A, Iron Tongue.

FIG. 3.



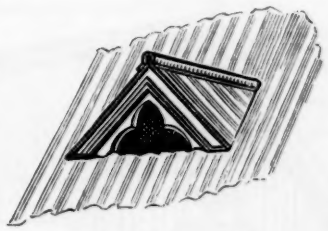
Elevation of windows (exterior).

FIG. 4.



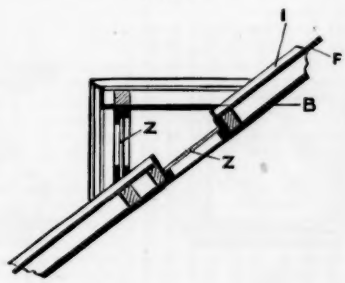
Windows: Section through ditto showing part of same open. I, Iron. F, Felt. M-B, Matchboarding.

FIG. 5.



Roof ventilator (exterior).

FIG. 6.



Section of roof ventilator. I, Iron. F, Felt. B, Boards. Z, Zinc.

following is the method adopted in the construction of these iron hospitals :—

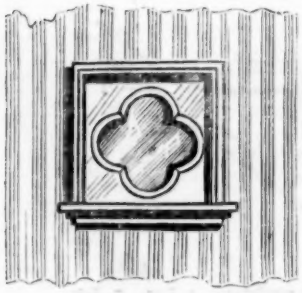
The foundations are formed of a layer of concrete over the whole site, unless the soil be of gravel, when this is not considered necessary. Upon the concrete is built the brick foundation, a space of twelve inches being left between the concrete and the floor. Air bricks and a damp-proof course are built into the walls of the foundation. The wall framings are composed of good strong timber, mortised and tenoned, not spiked, so as to admit of being easily taken down without injury to the structure. When the framework is put together each joint is marked by letters and

FIG. 7.

View of gable end showing ventilators.

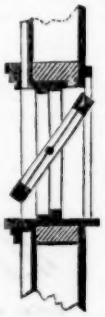
numbers to correspond. After the framework has been completed the principals, rafters and purlins are placed in position, iron tie and king rods being used to form a rigid roof. The exterior of this framework is then covered with inodorous or "sarking" felt, making the building completely weatherproof. Over the felt, both on the walls and roof, is placed the corrugated galvanised iron of 20, 22, or 24 gauge. The seams are single; and to prevent water lying between the sheets the junctions of walls are made secure and watertight, the whole being fastened with cone-headed galvanised fittings to prevent rust. The interior is lined in every part with match-boarding "grooved and

FIG. 8.



Ventilator (exterior).

FIG. 9.



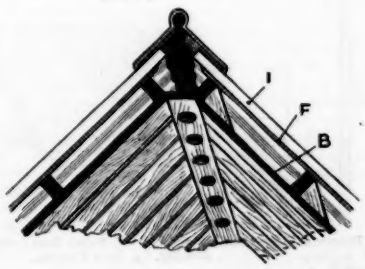
Section.

tongued," so as to allow of close fitting. A vertical section of the wall would therefore show it to be composed of three layers—viz., corrugated iron, felt and match-board, the two latter being separated for a distance of 5 in. to 6 in. by the timber framework (Fig. 1).

The flooring is constructed of boards 1¼ in. thick, accurately fitted together by the insertion of iron hooping (Fig. 2); the boards are laid on joists, the latter being 14 in. apart from each other. The whole of the interior is sized twice and coated with the best hard opal varnish, which can be easily cleaned and renovated when required.

Ventilation.—(*a*) Side windows (Figs. 3 and 4) are arranged according to the requirements of the Local Government Board, each window being fitted with falling sashes and side wings to prevent down draughts on patients. (*b*) About half way up the roof on each side and at a distance of 15 ft. apart Dormer ventilators (Figs. 5 and 6) are inserted, which are provided with perforated zinc and a "hit and miss" louvre door. (*c*) Inlet tubes similar to those of Tobin's system. (*d*) Gable ventilators (Figs. 5, 6 and 7) are also provided, which are hung so as to allow the whole of the opening to be used as an air space. This arrangement ensures a current of air from end to end of the wards. (*e*) In the median line of the roof along its whole extent are a series of holes 6 in. apart (Fig. 10), which pass upwards and open to the exterior beneath a ridge capping (Fig. 11), which is fixed upon the

FIG. 10.

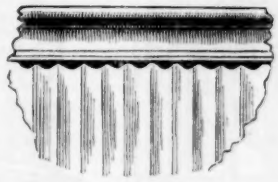


View of ventilating board (interior of roof).
F, Felt. I, Iron. B, Boarding.

corrugated iron work and under which vitiated air is allowed to escape.

Warming.—The method employed is in most cases left to the choice of the surveyor, but if advice be asked, in the case of a simple building the open stove placed in the centre of the ward upon a stone slab, and with a flue carried up through the roof, is usually recommended. Should warming by hot air, steam or hot water (high or low pressure) be required, this can easily be accomplished. The drainage arrangements are of course likewise left in the hands of the corporation or borough surveyor, but the plan of separating the w.c. and bath from the wards by a lobby having a window at each end, so as to ensure thorough cross ventilation, is always followed. The administrative block, when possible, is recommended to be separated from the general building, but approached by a covered corridor open at the sides. The mortuary, laundry, disinfecting chamber and an isolation

FIG. 11.



Ditto of ridge (exterior).

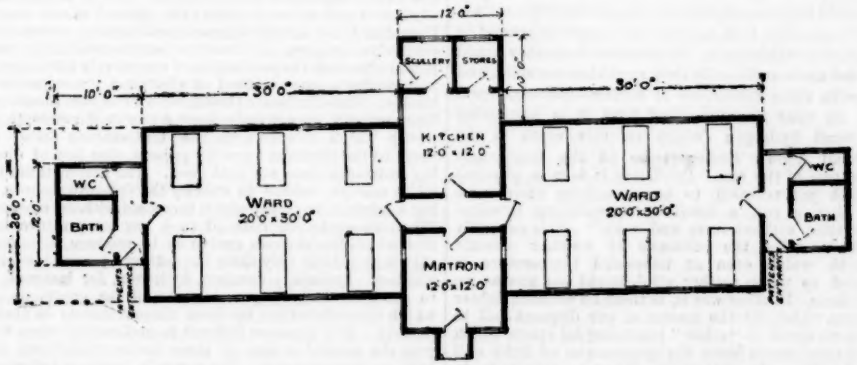
ward for doubtful cases are entirely separated from the wards and built in the form of outhouses, but on exactly the same principles as the main block. In those cases where something more is required than a plain iron building a good and pleasing effect can be obtained by painting. Mr. Humphreys recommends dull olive-green for the exterior and white for the window sashes, the roof being coloured to represent red tile.

As regards the durability of these buildings it is stated that in a manufacturing district the ironwork would probably require to be renovated after fifteen or twenty years, but in a purer atmosphere it is claimed that one of these iron hospitals will last fifty years, during which time the repairs needed would be almost *nil*.

Messrs. Humphreys, Limited, having informed us that one of their hospitals could be seen in use at Willesden on

application to the local authority, we were very kindly permitted to inspect the building. The hospital (Fig. 12) is built on the one-storeyed pavilion plan, having the administrative block in the middle and a ward on each side. The further end of each ward opens into a lobby, beyond which are placed the w.c. and bath. The wards are warmed by an open stove and ventilated according to the manner described above. The laundry and mortuary are cottages standing apart from the main building. Hospitals of this description have now been erected in various parts of the country, notably at Cardiff, Devonport, Lowestoft, Cleckheaton, Totton, Abingdon &c., and the result has up to the present time been quite satisfactory. It must be admitted that the system advocated by Mr. Humphreys for the building of hospitals for infectious cases offers many advantages. In the first place, although the materials employed are light, the building itself offers the hope of a fair amount of durability. Secondly, in times of emergency, either new hospitals can be erected or additions made to existing structures with a far greater rapidity than with brickwork, as it is possible to set up a moderate-sized hospital in eight or nine days. Thirdly, the initial expense once met, the hospital becomes the sole property of the sanitary authority setting it up, and should occasion arise it can be removed to another site. Fourthly, the great objection that has been hitherto urged against the use of iron for the construction of hospitals was the difficulty of warming.

FIG. 12.



This objection has been met by Mr. Humphreys by lining the iron shell with thick felt and leaving an air space of five to six inches between the latter and the matchboard inner wall, so that the building is kept warm in winter and cool in summer. We have suggested to Messrs. Humphreys that it is desirable to close the boards lining the interior of the building in a more simple fashion and to make the joints in the shape of a V, thus securing a more even surface for the purposes of cleansing and disinfection.

EMPLOYMENT OF EPILEPTICS.

No one, we imagine, who has taken the trouble to look into the condition of epileptics can fail to extend to the movement which may be said to have been fairly launched at the large and influential meeting at the Mansion House on Wednesday last his cordial sympathy, and from members of our own profession especially the attempt to cope in an effective way with the painful and often pathetic misfortunes which beset the already afflicted epileptic will, we feel sure, meet with hearty support and practical encouragement. Like all diseases, epilepsy brings in its train many evils, but in the case of this disease these are probably more numerous and certainly more far-reaching in their effects than in almost any other malady. The patient himself, beset with the fear which hangs like a fateful sword for ever over him, dreads the convulsion which seems to rend him limb from limb, and then, as it were, casts him aside helpless, bleeding, useless. Nor is the fear of the physical effects of his malady, of the worst of which he is happily unconscious, the reason for his worst apprehensions. He knows, often too well, the damaging effect on his prospects of such an attack, and how, should it be known to his employers, he will almost certainly be thrown out of work. There are many, no doubt, on whose mental state this fear of losing a position has a most disastrous effect and in whom it greatly intensifies the proclivity to attacks which is already strong enough, and it is in such cases that the Society for the Employment of Epileptics will find its most extensive and promising field of usefulness. No ambition could be nobler, no object more laudable, than to restore such patients to that self-respect which arises from the consciousness of ability and opportunity for remunerative work, and the effect on the patient's malady would be undoubtedly beneficial, for of this condition almost more than of any other is it true that "a merry heart doeth good like a medicine."

But epilepsy is one of those diseases which in quite an unusual degree interferes with the due performance of duty by others besides the patient. Too often an epileptic in a family is a pivot around which it turns; he must often be watched and guarded at almost every hour both night and day. In the class which this Society hopes especially to benefit such a condition implies so great a tax on the time and energy of perhaps an only brother or sister as to make regular daily work impossible, and there soon arises a condition of things which is sure sooner or later to lead to poverty and distress and is not unfrequently the precursor of crime. By the plan which the Society advocates (and to which we referred last week) of supplying epileptics with an opportunity of doing work which will render them at least partially self-supporting the difficulties will be solved. The patient himself is raised in his own estimation, but not unduly; he will no doubt work well when he is able, he will not have the awful feeling of dragging down with him others when he is unfit for work, and he will leave his relatives or friends free to pursue their own aims and perform their own duties, and so earn their own living and perhaps supplement the deficiencies of his.

The difficulties in the way of carrying out the scheme are considerable and the Society does not close its eyes to them. That they are not insuperable is shown by the success of a similar scheme abroad. At first, no doubt, many disappointments will have to be faced and numerous difficulties overcome, as is the case at the commencement of any important work. But the success of such an undertaking is worth striving for and we do not doubt that it will be attained. This is not the time to enter into a discussion of the details of the scheme. It is more our purpose to make clear how great is the responsibility in regard to a large and unfortunately increasing class of most afflicted human beings, of those amongst us who have escaped, through no merit of our own, the misfortunes from which they suffer and who are able to enjoy the privilege of holding out a helping hand to others. We confidently appeal to all who are able to help in a work the good effect of which will be in an unusual degree visible and tangible to come forward and support a scheme which will have the power of lightening many a burden and of restoring the brightness of hope to many a despairing soul.

LIQUID AIR.

ONE kind of matter is distinguished from another by its properties, and properties are to a large extent modified by temperature. We know matter, as it is presented on our earth, only by those properties which are in great part determined by what we call terrestrial conditions of temperature. But what must be the condition of matter in the sun? There complex organic bodies as we know these cannot exist; complex molecules would become simple molecules; whilst the metals—such as platinum, gold, lead, copper, iron—must be present in the condition of invisible gases. When cooled down they would liquefy, cooled again sufficiently they would become solid, and so we recognise three conditions of matter—gaseous, liquid and solid. In what an attenuated form it is interesting to reflect must hydrogen (which on this earth is the lightest of all known elements) be at the enormously high temperature of the sun. Perchance it is in a physical condition not yet revealed to us; something even more attenuated than a gas, a condition approaching Crookes' protyle, "matter without form and void." This naturally leads us to imagine the existence of another element on our earth which even at terrestrial temperature is so attenuated as to be neither solid, liquid nor gas as we understand them. In other words, is there an element lighter than hydrogen which all the means at our disposal fail to detect? Yet we speak of "ether" pervading all space, which if it did not exist would leave the phenomena of light still unexplained. Many elements, it is well known, may be made to assume the three conditions within a small range of temperature—as, for example, sulphur. It is a yellow solid at ordinary temperatures, melts to a reddish-brown liquid when heated, and finally is converted into a colourless gas if the heat is continued. Mercury is a liquid at ordinary temperatures, which may be vaporised into a colourless gas by heat, and solidified into a mass like lead on withdrawal of heat. Carbonic acid, again, is a colourless gas at ordinary temperatures, which may be liquefied to a colourless fluid, and finally solidified into a snow-white mass by the application of cold and pressure. Push these conditions far enough and doubtless even the refractory element hydrogen, which has hitherto resisted all attempts at liquefaction or solidification, will yield to the combined influence of cold and pressure, and become, it may be, a lustrous and shining metal. Purification of liquids has been effected by the process of fractional distillation, purification of solids by fractional precipitation; and before long it is probable that gases will yield themselves up as solid bodies by the process of fractional solidification, if we may so call it. This last process is conducted in this way. By pressure and the application of ordinary cold carbonic acid may be liquefied. The resulting liquid, when released from pressure, will evaporate quickly, so quickly as to solidify the remainder into solid carbonic acid. If ether then be added, the cold produced by the rapid conversion of the solid into gas is very intense—intense enough to solidify mercury; whilst other gases, assisted by pressure, may be liquefied by this means, which in their turn may be allowed to evaporate, and so on, until at last an excessively low degree of temperature, gradually approaching absolute zero (−273° C.) might be attained. The difficulty all along, however, has been to keep the gases thus liquefied away from the influences of external temperature, from radiation, conduction and convection. Liquid air is no new thing; it was produced some time ago, but the preservation of liquid air in large quantities is Professor Dewar's recent discovery, which is likely to lead to new and important revelations in chemical and physical science. He has produced liquid oxygen in such quantities as to be in a position now to use it, so to speak, as a reagent for the production of temperatures lower even than the boiling point of oxygen—182° below zero. By the discovery that by surrounding the vessel containing the liquid with a very high vacuum this influx of heat has been successfully reduced to one-seventh or to a yet lower point. This requires no ordinary vacuum, but one which Professor Dewar has succeeded in producing for the purpose of these researches, measurable not in atmospheres, but in hundredth thousand millionths of an atmosphere. Liquid oxygen protected thus by a vacuum jacket evaporates slowly, an evaporation that may be compared to the evaporation of ether in the cold. Adopting this precaution Professor Dewar has, it is said, prepared pints of liquid oxygen from which corresponding quantities of air may be liquefied. With these powerful means at hand the physicist and chemist may hope at last to attain to absolute zero (−273° C.). Already this important discovery has led to some very valuable and remarkable results. Air, it is found, liquefies as a whole the fluid containing nitrogen and oxygen in the proportion present in air—i.e., 4 : 1. Liquid air when boiled, however, obeys the laws of mixed liquids, the nitrogen with its lower boiling point distilling off first and showing no appreciable admixture of oxygen until one-half of the liquid is evaporated. Just as when a mixture of alcohol and water is boiled the alcohol distils over first. Liquid air behaves in the magnetic and in the spectroscopic field similarly as oxygen, but its colour is not so strikingly blue. It is probable that the production of excessively low temperature will render a new method of electrical investigation practicable. Thus Professor Dewar, with Professor Fleming, finds that perfectly pure metals show a power of conducting electricity which increases as the temperature falls; but if there be the slightest impurity present this law of diminishing resistance does not hold good. The non-metallic bodies, oddly enough, behave in exactly the opposite manner, showing a conductive power which increases with the temperature. When elements are reduced to a low temperature, such as that which liquid gases enable us to produce, it is observed that they exhibit very little disposition to combine with one another. Sodium, potassium, hydrogen, for instance, refuse to combine with oxygen, in spite of the enormous affinity which normally exists between these elements in their compounds. This is not so difficult to understand when we compare the mutual action of those bodies which are solid at ordinary temperatures. For example, however intimately the elements sulphur and iron may be mixed they will not combine until the temperature is raised sufficiently, when instantly combination with flame phenomena takes place and sulphide of iron results. Other examples could of course be quoted.

It may be thought by some that it was premature at this stage to place these so far interesting results, which may be taken to be but a shadow of things to come before the public; but Professor Dewar did wisely to preface his admirable lecture on Friday week last, at the Royal Institution, with an appeal for funds, without which he could not hope to prosecute what promises to be, as his hearers must have felt, one of the most interesting new lines of modern research. It is interesting to add that the Goldsmiths' Company, many members of which were present at the lecture, signified their approval of the valuable work being done by contributing £1000 towards the cost of these interesting and important researches.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6511 births and 4924 deaths were registered during the week ending Jan. 21st. The annual rate of mortality in these towns, which had been 29·2 and 28·3 per 1000 in the preceding two weeks, further declined last week to 24·9. In London the rate was 25·4 per 1000, whilst it averaged 24·5 in the thirty-two provincial towns. The lowest rates in these towns were 12·8 in Huddersfield, 16·1 in Gateshead, 17·5 in Burnley and 18·5 in Hull and in Newcastle-upon-Tyne; the highest rates were 27·0 in Norwich, 27·2 in Halifax, 28·8 in Liverpool, 29·6 in Leeds and 30·2 in Manchester. The 4924 deaths included 398 which were referred to the principal zymotic diseases, against 431 and 435 in the preceding two weeks; of these, 114 resulted from measles, 76 from whooping-cough, 62 from diphtheria, 54 from scarlet fever, 39 from diarrhœa, 34 from "fever" (principally enteric), and 19 from small-pox. The lowest death-rates from these diseases were recorded in Brighton, Swansea, Wolverhampton and Leicester, whilst they caused the highest rates in Manchester, Oldham, Cardiff, Plymouth and Hull. The greatest mortality from measles occurred in Birkenhead, West Ham, Portsmouth, Plymouth, Bolton, Leeds, Cardiff and Hull; from scarlet fever in Plymouth; and from whooping-cough in Birmingham and Norwich. The mortality from "fever" showed no marked excess last week in any of the thirty-three large towns. The 62 fatal cases of diphtheria included 37 in London, 3 in Salford and 3 in Sheffield. Six deaths from small-pox were registered in Manchester, 5 in Oldham, 2 in

Halifax and 1 each in Derby, Bradford, Leeds, Sunderland, Gateshead and London; 62 cases of this disease were under treatment in the Metropolitan Asylum Hospitals and 9 in the Highgate Small-pox Hospital on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2774, against 3254, 3121 and 2973 on the preceding three Saturdays; 236 new cases were admitted during the week, against 202 and 234 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 953 and 984 in the preceding two weeks, declined again last week to 739, but were 31 above the corrected average. The causes of 101, or 2·0 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Cardiff, Oldham, Sunderland, Newcastle-upon-Tyne and in eight other smaller towns; the largest proportions of uncertified deaths were registered in Swansea, Blackburn., Preston, Halifax and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 27·1 and 28·5 per 1000 in the preceding two weeks, declined again to 27·7 during the week ending Jan. 21st, but exceeded by 2·8 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 20·1 in Aberdeen and 23·2 in Greenock to 29 3 in Leith and 34·3 in Perth. The 780 deaths in these towns included 59 which were referred to measles, 18 to whooping-cough, 12 to scarlet fever, 3 to diarrhœa, 3 to diphtheria, 2 to small-pox and 1 to "fever." In all, 98 deaths resulted from these principal zymotic diseases, against 146 and 119 in the preceding two weeks. These 98 deaths were equal to an annual rate of 3·5 per 1000, which exceeded by 1·5 the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 79 in each of the preceding two weeks, declined last week to 59, of which 28 occurred in Glasgow, 10 in Dundee, 8 in Edinburgh and 8 in Leith. The deaths referred to whooping-cough, which had been 20 and 11 in the preceding two weeks, rose again to 18 last week and included 14 in Glasgow and 2 in Dundee. The fatal cases of scarlet fever, which had been 17 and 8 in the previous two weeks, increased to 12 last week, of which 9 occurred in Glasgow. The 3 deaths from diphtheria showed a marked decline from the numbers recorded in recent weeks and included 2 in Glasgow, where the 2 fatal cases of small-pox were also registered. The deaths referred to diseases of the respiratory organs in these towns, which had increased in the preceding three weeks from 168 to 241, declined again last week to 227 and were within 3 of the number in the corresponding week of last year. The causes of 73, or more than 9 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 31·3 and 34 6 per 1000 in the preceding two weeks, declined again to 30 3 during the week ending Jan. 21st. During the first three weeks of the current quarter the death-rate in the city has averaged 32·1 per 1000, against 23·7 in London and 29·5 in Edinburgh. The 203 deaths in Dublin during the week under notice showed a decline of 29 from the number in the previous week, and included 11 which were referred to "fever," 4 to whooping-cough, 1 to diarrhœa, and not one either to small-pox, measles, scarlet fever or diphtheria. In all, 16 deaths resulted from these principal zymotic diseases, equal to an annual rate of 2·4 per 1000, the zymotic death-rate during the same period being 1·9 in London and 2·0 in Edinburgh. The deaths referred to different forms of "fever," which had been 11 and 7 in the preceding two weeks, rose again to 11 last week. The fatal cases of whooping-cough, which had been 2 and 3 in the preceding two weeks, further rose to 4 last week. The 203 deaths registered in Dublin last week included 24 of infants under one year of age and 66 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a decline from the high numbers recorded in the preceding week. Five inquest cases and 1 death from violence were registered; and 68, or rather more than a third, of the deaths occurred in public institutions. The causes of 16, or nearly 8 per cent. of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS IN THE MEDICAL STAFF.

SURGEON-COLONEL RUDD has been appointed to the Southern district in succession to Surgeon-Major-General Lithgow, retired. Surgeon-Colonel Paterson, on being relieved at Hong Kong by Surgeon-Colonel Preston, will proceed to Malta to relieve Surgeon-Major-General Madden in the Administrative Medical Charge. Surgeon-Major Woods has been invalided home from Bombay. Surgeon-Captain Wilson has embarked for India in the *Himalaya* and Surgeon-Captains Wade-Brown and Poole have also embarked for India in the *Crocodile*. Surgeon-Captain Wiles has joined the North British district for duty and Surgeon-Captain Kennedy has been posted to Ireland on return from service abroad. Surgeon-Major James has arrived in Malta on a tour of foreign service and Surgeon-Captain Carr has joined at Woolwich.

ARMY MEDICAL STAFF.

Brigade-Surgeon-Lieutenant-Colonel Charles A. Maunsell, M.D., to be Surgeon-Colonel vice F. W. Wade; and Surgeon-Lieutenant-Colonel James Macartney, M.D., to be Brigade-Surgeon-Lieutenant-Colonel, vice C. A. Maunsell, M.D. (all dated Dec. 15th, 1892); Brigade-Surgeon-Lieutenant-Colonel Frederick B. Scott, M.D., C.M.G., to be Surgeon-Colonel, vice C. H. Y. Godwin, deceased; Surgeon-Lieutenant-Colonel James H. Reynolds, M.B., V.C., to be Brigade-Surgeon-Lieutenant-Colonel, vice F. B. Scott, M.D., C.M.G. (both dated Dec. 25th, 1892); and Surgeon-Lieutenant-Colonel Frank Edward Barrow retires on retired pay (dated Jan. 25th, 1893).

INDIA AND THE INDIAN MEDICAL SERVICE.

The following appointments have been made:—Surgeon-Captain J. G. Hojel, M.B., B.S., on relief by Surgeon-Captain Childe, to act as Professor of Materia Medica and Pharmacy in the Grant Medical College, vice Surgeon-Captain Baker, pending further orders. Surgeon-Captain A. L. Duke, I.M.S. (Bengal), Residency Surgeon in the Persian Gulf, to officiate as Agency Surgeon, Meshed, from the date of assuming charge and during the absence on special leave of Surgeon-Captain H. R. Woolbert, M.B. Surgeon-Major J. F. Brodie, Medical Staff, transferred from the Madras Presidency, is posted to the Deesa district and appointed to the Medical Charge of Station Hospital, Deesa. Surgeon-Captain W. J. Baker, Medical Staff, is transferred from general duty, Sind district, to general duty, Bombay district. Surgeon-Captain R. Kirkpatrick, Medical Staff, arrived from England, is posted to general duty, Poona district. Surgeon-Captain N. Faichnie, Medical Staff, to general duty, Nagpore district. Surgeon-Captain R. J. Copeland, Medical Staff, is transferred from general duty, Nagpore district, to general duty, Poona district. Surgeon-Lieutenant J. I. Macrae, I.M.S., is posted to Madras district for duty; Surgeon-Captain W. G. Birrell, M.B., on arrival from England, to do duty, Secunderabad district; Surgeon-Captain F. McDowell, on arrival from England, to do duty, Madras district. Surgeon-Captain R. J. Macnamara, Officiating Superintendent, Central Gaol, Mooltan, is confirmed in that appointment from Nov. 10th, 1892, and Surgeon-Major C. J. Bamber is appointed a Civil Surgeon of the 2nd Class from the same date. Leave has been granted to Surgeon-Major C. J. McCartie, M.D., 39th Bengal Infantry (m.c.), for one year; to Surgeon-Lieutenant-Colonel E. Townsend, M.D., to England for six months on medical certificate; and to Surgeon-Major C. R. Woods to England for six months on medical certificate. The undermentioned officer has been permitted by the Secretary of State for India to retire from the service from Dec. 3rd 1892, subject to Her Majesty's approval: Brigade-Surgeon Lieutenant-Colonel J. Davidson, Indian Medical Service

VOLUNTEER CORPS.

1st Volunteer Battalion, the Highland Light Infantry: The undermentioned gentlemen to be Surgeon-Lieutenants:—Archibald Thomson Campbell, M.B., and James Swanson, M.B. (both dated Jan. 21st, 1893).—9th Lanarkshire:

Archibald Campbell, M.B., to be Surgeon-Lieutenant (dated Jan. 21st, 1893).—1st Cadet Battalion, the Manchester Regiment: Acting Surgeon M. P. Ledward, M.D., resigns his appointment (dated Jan. 21st, 1893).

THE VOLUNTEER OFFICERS' DECORATION.

This decoration has been conferred upon the following officers:—*North-Western District.—Rifle:* 1st Volunteer Battalion, the Cheshire Regiment. Surgeon-Lieutenant-Colonel David Russell, M.D.; 2nd (Westmoreland) Volunteer Battalion, the Border Regiment, Honorary Surgeon-Major Samuel Noble, retired; 2nd Volunteer Battalion, the King's (Shropshire Light Infantry), Honorary Surgeon-Major Folliott James Sandford, M.D., retired. *Southern District.—Rifle:* 5th (Isle of Wight, Princess Beatrice's) Volunteer Battalion, the Hampshire Regiment, Surgeon and Hon. Surgeon-Major Charles Watts Parkinson, retired; 2nd Volunteer Battalion, the Wiltshire Regiment, Surgeon-Lieutenant-Colonel Edward N. Corless. *North British District.—Rifle:* 1st Roxburgh and Selkirk (the Border), Surgeon George William Thomson, M.D., retired; Honorary Staff Surgeon James Cowan Woodburn, M.D., retired, late Clyde Division, Royal Naval Artillery Volunteers and 1st Lanarkshire Artillery Volunteers.

THE STATION HOSPITAL SYSTEM FOR THE NATIVE ARMY.

It has been decided by the Government of India, on the recommendation of the Commander-in-Chief, that the experimental trial of the Station Hospital System for the Native Army shall be terminated.

NEWLY COMMISSIONED MEDICAL OFFICERS AND FOREIGN SERVICE.

We have ascertained that there is no truth in the rumour that medical officers newly commissioned are to be kept at home for a fixed term. They will, as heretofore, proceed on foreign service in their turn; but, as only a certain proportion are sent to India in the trooping season, it must happen that a considerable time elapses between the dates of their commissions and the receipt of their orders for service abroad.

MARCHING COMPETITIONS.

A memorandum has been issued from the War Office in which the Commander-in-Chief discourages these so-called marching competitions, and says that he is unable to see that any advantage will result from them, while more or less harm probably may ensue. Competitions of this nature, while exhausting some of the competitors unduly, can answer no useful purpose; and as they are conducted at different stations under very different conditions, they offer no test of relative merit. At the same time his Royal Highness expresses his desire that the physical training of soldiers should be encouraged, as far as possible, by other methods and in other directions. Under all the circumstances of the case this judgment seems to be a sound one. It is the marching powers of a regiment as a whole, and not those of a few men selected from a regiment, that are tested in a campaign, and competitions of this sort, unless they are carefully watched, are very likely to lead to abuse.

ENGLAND AND EGYPT.

The reinforcement of the British army of occupation in Egypt is the question that for the moment engages the attention of the War Office in this country, and it and the Admiralty together have been busy arranging details as to stores and transports. The medical staff in Egypt will have to be proportionately increased, of course, but the increase of strength of the army of occupation will probably soon exercise a tranquillising effect on the inhabitants of the towns and provinces. The climate of Egypt is delightful at the present season, notwithstanding that it cannot be said that the sanitary state of either Cairo or Alexandria is satisfactory. Public works in the way of sewerage and water-supply and in general cleanliness will have to be undertaken before any marked improvement can take place in this respect. Various plans have been proposed at different times for dealing with the sewage of Cairo, but, so far as we know, no plan has yet been definitely adopted.

THE LATE CAPTAIN NELSON.

News was received at Leeds, of which town the deceased was a native, on the 19th instant of the death of Captain R. H. Nelson at Dagoreti on Dec. 26th, from the effects of dysentery whilst in the service of the British East India Company. It will be remembered that Captain Nelson was one of Mr. Stanley's lieutenants in the Emin Pasha Relief Expedition and that the sufferings which he underwent on that occasion and the fortitude with which he bore them were described in Surgeon Parke's work, "My Experiences in Equatorial Africa." Captain Nelson gained his first experience of African life during the Zulu War, when he served as an officer of the Mounted Volunteer Corps with Wood's flying column, and subsequently in Basuto and Bechuanaland. In January, 1887, he joined Stanley's Expedition and left England with the exploring party and returned with Mr. Stanley in 1890.

HALF-PAY FOR SICKNESS CONTRACTED ON DUTY.

It has been decided that time passed on half-pay on account of ill-health contracted on military duty not exceeding one year shall be allowed to reckon as service for pension and promotion in the case of an officer of the Indian Staff Corps or of the Indian Medical Service.

Correspondence.

"Audi alteram partem."

THE PROPOSED TEACHING UNIVERSITY FOR LONDON.

To the Editors of THE LANCET.

SIRS,—It is impossible to combine a due recognition of the wants of many classes of students who may fairly claim University degrees with that of the rights and status of graduates of the existing University of London. A London degree implies that the holder has passed a series of difficult examinations held under very rigid conditions, but his training may have been obtained, except in the case of medical degrees, entirely from books or by correspondence. An opportunity is wanted by many of obtaining a degree which will be a proof that the holder has had the training which daily contact with a master mind and with other learners only can afford. A far greater elasticity, too, is required as to the subjects, such, for example, as exists to a large extent in Oxford and Cambridge regulations for honour degrees. For this an entirely new University must be constituted, but there is no reason why it should not utilise to the fullest possible extent existing educational bodies. To speak first of arts and science degrees, let three years' study in one or more institutions be required. The first of these years might be dispensed with in case the candidate could produce evidence of having passed some public examinations, a comprehensive list of which might be drawn up, including not merely examinations such as the senior Oxford and Cambridge locals but pupil teachers' examinations and technical examinations such as the "first conjoint" of the Colleges of Physicians and Surgeons, or one of those held by such bodies as the Society of Actuaries, the Institute of Chemistry, the Institute of British Architects &c. The next two years the student should attend a certain number of courses of instruction—say, for example, six, four of which (minor courses) might take place in any institution which might be recognised for the purpose, such as King's College, the Medical Schools and even the City of London College and the Birkbeck, though in these latter institutions the course would probably extend over two or three years instead of one, as about 100 lectures would be needed. As to the remaining two major courses a continuous systematic and advanced course, implying, say, 200 lectures each, should be required under professors of the University. The professors might some of them be appointed to new chairs, teaching solely members of the University, whilst others might be appointed from amongst the most eminent of existing metropolitan teachers. In the case of subjects which admit of practical handling in a laboratory no professorial teaching would be recognised that did not include practical study. In all these courses, both minor and major, the teacher—with perhaps an assessor appointed by the University—should at regular intervals examine his students, and the University should hold a final degree examination embracing the major and perhaps the minor subjects. While allowing great freedom in the choice of subjects and in the order in which they are taken, it would be necessary to lay down a few rules for each degree. For B.A. say that Latin, Greek, and a mode-

rate amount of mathematics might be compulsory; for B.Sc. one ancient and one modern language (unless these had been included in the first year's course), chemistry and mathematics; for M.B., in addition to the qualifying courses and examinations, which would cover all the minor courses of the University, a certain higher standard in either classics or mathematics should be required, as also two professorial courses, such as physiology and pathology, or a clinical subject. According to this scheme, a degree in arts or science would be open to men who might from their preliminary training be unable to think of preparing for such an ordeal as the London Matriculation. Take for an example a bright Board-school boy apprenticed in engineering or chemical works or engaged in an office. By attending evening classes he might pass a sufficient number of Society of Arts and Science and Art examinations to cover the first year's requirements. He might then, by attending an institution of the Birkbeck character for several years obtain certificates of the four minor courses. For the professorial courses he would probably have to give up his occupation for a year and attend college, though it is possible that a sufficiently advanced professorial course extending over two or three years might be arranged in the evenings. In this way a degree in science or in engineering might be obtained. Similarly an elementary schoolmaster who might have obtained certificates of his four minor courses in his training college might manage his professorial courses by either one year's attendance in the daytime or by two or three years' attendance on evenings and by Saturday instruction. A medical man who had studied in London and obtained the conjoint diploma would require a year, which might be spent under eminent teachers of practical subjects, and if he had not already fulfilled the requirements as to general education of course he would have to do so now. A medical student would probably prefer to take one professorial course in the early and one in the later portion of his career. The M.B. would thus be a decided advance on the mere qualification, but would be far less vexatious than the London M.B. The B.A. and B.Sc. degrees would be in educational value a nearer approach to Oxford and Cambridge honour degrees than to London ones. Law, music and even divinity degrees might doubtless be arranged for on a similar plan, which implies simply the recognition of existing teachers and institutions for the minor subjects and that of a few very eminent teachers as professors for the major subjects. Both sexes and all denominations and classes would thus be provided with the means of obtaining not merely degrees but real University education.

I am, Sirs, yours faithfully,

THEODORE MAXWELL, M.D., B.A. Camb., B.Sc.

Woolwich, Jan. 23rd, 1893.

"THE SENSITIVENESS OF THE PERITONEUM."

To the Editors of THE LANCET.

SIRS,—The evidence published in your last issue by Mr. Lawson Tait on the subject of the tenderness to touch of the healthy peritoneum was prefaced with an interpretation by himself. May I be allowed, as Mr. Tait refers to my name, to append, not any interpretation of the evidence, for that should lie with the individual reader, but a few remarks in analysis of the position of Mr. Tait's dictum in the matter?

When Mr. Tait first announced, in contradiction to a lecture recently delivered before the College of Physicians, that the healthy peritoneum is an extremely sensitive surface, he rested his statement upon the "agony to the patients" observed in the "few experiences" "when I have very rarely been obliged to put my fingers within the peritoneum of a patient not under an anæsthetic." At three weeks' later date his basis of observation (his opinion having in that time met with criticism) became enlarged to "the interpretation of the phenomena yielded to me by 3300 human peritoneal cavities." In his last letter it seems to him that on a matter "so simple" and "so cardinal our ignorance is even now profound," and he furnishes extracts from replies received to a circular letter issued to "all the surgeons of Great Britain and Ireland whose names are familiar in connexion with abdominal work." The extracts given are from nineteen letters, of which two have to be deducted as their writers express inability to furnish evidence. Of the seventeen observers, twelve record that their experience is opposed to Mr. Tait's view and mention various facts they consider incompatible with that view. On the other hand, five record an opinion more or less in harmony with that of Mr. Tait. Of the extracts of these five, two are unfortunately extremely brief and confined to expression of opinion only. Of the remaining three, one speaks of "reflex sensibility" of the peritoneum, not stating any belief or evidence of these being reflexes affecting consciousness; and one, although affirming sensitiveness, describes it as "not such as to require the use of an anæsthetic." The third, however, by Mr. Tait's assistant, does fully endorse Mr. Tait's own experience. Perhaps I may be allowed, as one of your readers interested in this question, to thank those gentlemen who have contributed their experience on the point. Especially I would do so as one whose time, mainly removed from clinical work, gives little opportunity for those precious glimpses of the physiology of the human nervous system that are so helpful for that analysis of mind it is one of the chief aims of science to perform. For students, like myself, removed from such opportunities the evidence reported from the clinicians in your last issue cannot but possess peculiar interest. Of this evidence the major part agrees with surgical statements previously published *contra* Mr. Tait's opinion, and *reverses* his assertion that the experiments on "animals" and the observations upon man do not agree.

I would not trespass further on your space were it not for the following point, which is material to Mr. Tait: In the preamble to his last communication his circular letter of inquiry is prefaced by the statement that it has been forwarded to "all the surgeons of Great Britain and Ireland whose names are familiar in connexion with abdominal work." Knowledge has come into my possession which places this statement by Mr. Tait in so curious a position that I must decline to pursue with him further any discussion whatsoever.—I am, Sirs, yours truly,

Jan. 24th, 1893. C. S. SHERRINGTON.

To the Editors of THE LANCET.

SIRS,—The question of the sensibility of the peritoneum, introduced by Mr. Lawson Tait, is a very interesting one and there ought to be no difficulty in answering it. I am afraid a correct solution will never be arrived at by arguing or by writing to a large number of surgeons to get an expression of their opinions. General impressions are worthless if accuracy is to be obtained. Nothing but direct observation, whilst bearing in mind the special points to be observed, can be of any value. The conclusions arrived at after reading Mr. Tait's remarks and his collected opinions, are (1) that certain human peritoneums are very sensitive, others are not; (2) three observers of the same series of cases have very decided differences of opinion: here is the fallacy of general impressions. A number of cases carefully observed over a period of three or six months from several of our large hospitals should supply accurate data for arriving at some reliable conclusion. The following case has I think some bearing on the subject. On Jan. 9th, 1893, I operated on a case of strangulated femoral hernia with Mr. Clarke of Morley. The patient was a man aged sixty-seven, with bad bronchitis and a feeble, irregular pulse. I operated without any anæsthetic as I felt it would be an additional risk to administer one. The patient winced a little with the skin incision, which was made by transfixion. The separation of the sac from the surrounding structures he said he could feel. I opened the sac, divided the stricture, reduced the gut and put my finger through the femoral ring into the peritoneal cavity. I asked the patient if it was painful. He said no. I then separated the sac as high up as possible, ligatured it near the femoral ring, and removed it. The patient said he could feel this, but "it was not so bad." After cleansing the parts I put in four or five sutures; at each prick of the needle the patient called out, and he said the stitching up was by far the most painful part of the operation. I am, Sirs, yours truly,

Leeds, Jan. 24th, 1893. H. LITTLEWOOD.

"INNERVATION OF THE PALATE."

To the Editors of THE LANCET.

SIRS,—In answer to Dr. Leonard Kidd's criticism of my case of palatine paralysis in the series of cases of facial paralysis published in THE LANCET of Jan. 7th, I have much

pleasure in adding for his information that the half of the palate on the same side as the lesion was unaffected by mechanical stimulation. The velum was not attenuated and with respect to size capable of being approximated to the posterior pharyngeal wall. No physical impedimenta in the nature of membrane on its posterior wall, new growths in its substance or neoplasms in the naso-pharyngeal cavity were present. From these and the data already given in my paper, together with the fact that fluid returned through the nose, I could not possibly arrive at any other conclusion than that of unilateral paralysis of the soft palate. These conditions, pointing to this fact, were readily recognised by my clinical assistants and the students attending my clinique at the Evelina Hospital. The object of a scientific paper being not to teach the symptoms of any well-recognised disease, but to detail clinical facts, I did not think it necessary to give all the information that Dr. Kidd misses. Of adenoid vegetations occurring in my practice I have notes of over two hundred cases, yet I have not met with in these the symptoms of passage of fluid *viâ* the nares, but I should not be so rash as to deny its occasional occurrence for such has been noted by competent observers. Had adenoid vegetations been present in this case I should certainly have mentioned that fact. Dr. Kidd's supposition that the tonsils were removed for chronic hypertrophy is correct. On the patient's return from the fever hospital the left tonsil, as stated, was found enlarged, but no subacute inflammatory condition was present.

The case quoted by Dr. Kidd is interesting, but by no means unfamiliar to the medical profession. It is an example in which the passage of fluid through the nares might have been due to mechanical causes, but seeing that it was a case of diphtheria it would be difficult to deny that there was no palatine paralysis, and the fact that there were no other palsies, or that the patellar reflexes were present would not militate against this. Certainly the absence of facial paralysis, upon which stress has been laid by Dr. Kidd, would not negative this diagnosis, for this complication must be infinitely rare as a sequel to that disease. Interesting as his case is it is hardly on all fours with the one I quote, where facial paralysis was complicated by paresis of the corresponding half of the soft palate. Moreover, Dr. Kidd seems to have ignored the fact that the palatine paresis in my case was present *after* ablation of both tonsils and *before* admission to the Fever Hospital, whereas the secondary enlargement of the left tonsil was found only after her return from that institution; therefore the condition of the left tonsil has no bearing on the case. It was merely mentioned as a fact worthy of note. Much as I respect the opinions of Drs. Gowers and Hughlings Jackson and much as I appreciate the work of Dr. Beevor and Mr. Horsley, I do not feel justified in ignoring ocular evidence before me, or passing over clinical observations which I have by your courtesy placed on record, because such did not completely coincide with the clinical experience and anatomical views of a section of the profession. Whether the palate be supplied by the spinal accessory nerve or from the facial through the petrosal nerve of the Vidian, the facts I have recorded remain.

I am, Sirs, yours faithfully,

GEORGE CARPENTER.

Queen Anne-street, W., Jan. 25th, 1893.

ANÆSTHETICS.

To the Editors of THE LANCET.

SIRS,—With regard to your review of Dr. Dudley Buxton's book on Anæsthetics, you notice "but two points omitted," the "great improvements in Junker's inhaler" and "the practice of admitting air during the administration of nitrous oxide." Dr. Junker did not originate the principle of his inhaler, which was applied to methylene administration. The principle was in use at Guy's Hospital in 1864. A chloroform bottle on the same principle, that does not allow chloroform to pass over unless turned upside down, has been in use since I have been on the staff. The administration of air with nitrous oxide was in use by myself twenty years ago, and was tried before that. It is just ten years ago, come May, that an ovariotomy was done under my own administration of gas and air successfully. I may add that the bulb, to prevent too sudden rush of gas blocking the outlet from the gas cylinder, has been in existence over fifteen years, and mine has the original piece of string inserted to prevent noise. Glass and shot were both passed over as being too heavy. This is an engineer's idea.

I am, Sirs, yours truly,

Brook-street, W., Jan. 20th, 1893. TOM BIRD.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Port Sanitary Authority.

THE inquiry which has been opened before Mr. Jenner-Fust and Dr. Barry, of the Local Government Board, has been adjourned until the end of this month. This inquiry possesses far more than local interest, as anyone may judge by taking a glance at Liverpool's geographical position. There is no port at the mouth of the river Mersey analogous to Gravesend at the mouth of the Thames, and the number of vessels which annually arrive in the Mersey is 22,000. Although this includes many arrivals and departures of the same vessels, some of which call at Queenstown and other intermediate ports, a very large proportion comprises vessels which arrive here after a voyage long or short, Liverpool being the first port visited since leaving the point of departure. Under any circumstances it is of paramount importance that steps should be taken to prevent any patient with infectious disease from being allowed to land on either the Lancashire or Cheshire side and to spread disease to an extent which could be neither calculated nor prevented. But more important than ever is it now when cholera has appeared in our midst and when there is every probability of its appearing again. At present the medical officer of health for the city is also the port sanitary medical officer. It must, however, be manifest that the duties of medical officer of health for such a city as Liverpool must be more than sufficient for any one man's whole energies, and that there are cogent reasons why Liverpool should have its own port sanitary medical officer acting with, but subordinate to, the medical officer of health for the city. It must also be remembered that Liverpool is liable to the importation of cholera, small-pox and other diseases from the east coast and overland a circumstance which in itself requires the most careful vigilance on the part of the medical officer of health and his staff. With reference to disease brought by vessels arriving in the river there is no difficulty in having full notification of any and every such case sent to the medical officer of health or port sanitary medical officer; but it is of only secondary importance to this that the vessel notified should be boarded as soon as possible by the medical officer, since a favourable wind may bring up vessels in scores, and even hundreds, into the river within a few days. In short, the necessity for a special port sanitary medical officer does not admit of argument, though there must be some discussion and difference of opinion as to the area of his duties and as to the question of upon whom the expenses of his office are to fall.

The Society for the Prevention of Cruelty to Children.

At the annual meeting of the Society for the Prevention of Cruelty to Children, held last week, there was a large attendance. The report showed that the number of cases dealt with this year had been 1803 as compared with 1403 last year, the number of children affected being 2481 as compared with 2039, these numbers being larger than those dealt with by the Society in any previous year. The police had taken to the shelter 1015 children (as compared with 502 last year) found begging and selling in the streets after 10 P.M., the children being under ten years of age. In 614 cases the parents had been cautioned and dismissed, in 247 cases fined, and in 19 cases sent to prison. A letter was read from the stipendiary magistrate suggesting that the time had come when the City Council might make it unlawful for these children to trade later than 9 P.M., or even 8 P.M.—a suggestion which received the approval of the meeting.

The Northern Hospital.

The annual meeting of the Northern Hospital of this city was also held last week, and the proceedings derived additional interest from the circumstance that the erection of a new hospital has been all but resolved upon. The only question is that of which of two sites should be selected, one being that of the present hospital, with possibly some additional space; the other being a piece of ground to the westward and nearer the river. Each has of course its merits and

demerits, but the necessity for a new hospital is quite beyond question. The present building was erected nearly fifty years ago, and though built for its purpose is totally unfit for the requirements of a hospital of the present day. But, apart from this, it is in want of repair and is irreparable; it has done its duty in past days, and all that can be expected of it now is that it shall continue to receive the patients until the new hospital is ready for them. This is a point which will have an important bearing on the choice of site. The hospital is situated near busy docks, an important railway terminus and other centres of industry and accident; it is therefore most important that there shall be no reduction in its resources while the new building is being erected. Fortunately, it possesses an excellent committee of business men who work heartily and harmoniously with the medical staff.

January 23rd.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Medical Charities in Newcastle.

OUR medical institutions are now commencing their winter meetings. So far they all show an increase of work performed during the past year, but not an adequate increase in subscriptions from the general public. There is, however, one bright feature observable in the reports—namely, that the working classes, who principally benefit by our medical charities, are showing an increased interest in them, as evidenced by their contributions. The Newcastle Throat and Ear Hospital has treated in- and out-door together 3167 cases. The general public have subscribed less than £100, while the contributions of patients and the subscriptions of the working classes have reached nearly £400. The Skin Diseases Hospital also had their annual meeting, and the statement shows a large amount of work done—2217 consultations with medicine having been given. An extension of the premises for providing baths and beds is urgently required.

Durham City and its Sanitation.

At a late meeting of the Durham Corporation as a sanitary authority Dr. Jepson moved and carried a resolution adopting the Infectious Diseases Act (notification to commence in February). Dr. Jepson, who has persevered with this reform for a long time, has now the gratification of seeing it adopted—at a very opportune period too, for I hear that small-pox has made its appearance in every part of the city. There are still several cases in the county gaol. As regards small-pox in the county, it is still, I believe, on the increase at West Hartlepool. Seven cases in all are reported. A case is reported also at the port of Blyth: it was apparently introduced from Shields. I have not heard of any fresh cases at Newcastle since sending my last letter.

Newcastle City Lunatic Asylum.

The medical superintendent of the Newcastle City Lunatic Asylum has reported that the asylum is now so overcrowded that some immediate provision should be made for the accommodation and care of patients, and he suggests that the present chapel should be utilised for sixty beds. His suggestion that a temporary iron structure might be put up in the grounds in lieu of a chapel has been adopted by the committee.

Sunderland.

Mr. James Laing of Sunderland has made the handsome donation of £500 towards providing a fund for the support of those unpaid nurses who may from time to time become incapacitated by failure of health or by age from continuing their work at the infirmary. The fund was formed about three years ago and the infirmary committee contribute £100 per annum towards it.—I am glad to hear that the medical officer of health for Sunderland is now recovering from his late severe attack of scarlet fever.

Harrogate Hospital.

The annual meeting (its sixty-seventh) of the Harrogate Hospital and Convalescent Home has just been held. The hospital is open to patients from all parts of the kingdom and nearly 1000 have been treated during the past year; about 100 have been received from the large towns and populous districts of Northumberland and Durham &c. The financial statement was satisfactory, but there is a building debt of £8000 on the hospital and home.

Newcastle-on-Tyne, Jan. 24th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

The Board of Supervision on Small-pox.

The Board of Supervision has issued a circular to local authorities directing their attention to precautionary and preventive measures in view of the danger of small-pox becoming epidemic. It is thought advisable that local authorities should lose no time in ascertaining whether there are persons in their districts either unvaccinated or imperfectly protected. Dr. Husband has made the following suggestions approved by the Board: 1. Everyone should make sure that he has been well vaccinated in infancy. 2. The unvaccinated should be searched for, especially among the unsettled and migratory portion of the population, among whom the disease is likely to appear in the first instance. 3. Persons who desire absolute security should be revaccinated. 4. Infants should be vaccinated early. To effect these not only the medical officers of local authorities but other medical practitioners, and where necessary medical students and other suitable persons, should, it is suggested, be employed to make house-to-house visitations to perform such vaccinations or revaccinations and to keep a record of the persons so vaccinated.

Edinburgh Royal Infirmary.

A meeting of the contributors to the Royal Infirmary was held last week to receive the report of the committee appointed to examine the report of the managers for the past year. The committee pointed out that the expenditure had increased owing to a greater amount being paid in wages and to the maintenance of patients. The annual cost of each occupied bed had hitherto been £64 7*s.* 5*d.*, as against £62 10*s.* for the previous year.

The Scottish Universities Commission.

A circular letter has been addressed to the Universities stating that in revising Draft Ordinance No. 1 relating to Parliamentary grants &c. the Commissioners propose to make certain amendments, one of which is that the Edinburgh Medical Professors should be offered the option of surrendering their fees and receiving instead the salaries provided by the ordinance for their successors.

Edinburgh City Hospital.

During the month of December 242 patients were admitted to this hospital, of which 17 were cases of typhoid fever, 9 diphtheria, 7 small-pox, 88 scarlet fever, 100 measles and 21 of other diseases. During the month 220 patients were discharged and 15 died. At the end of the month the number of patients in the hospital was 293. During the year 1892 2006 patients had been admitted, 1725 discharged, and 126 died.

Edinburgh Mortality for 1892.

The total number of deaths during last year was 4746, giving a death-rate of 17·92 per 1000, against an average death-rate of 18·06 for the five years preceding.

Infectious Diseases in Edinburgh.

During the month of December 2096 cases of infectious disease were intimated, this being the largest number reported for the corresponding month for several years. During the year 1892 10,124 cases of infectious disease were reported. These comprised: typhus fever, 18; typhoid fever, 238; diphtheria, 203; small-pox, 8; scarlet fever, 1856; and measles, 7801.

Health of Edinburgh and Leith.

The mortality last week was 131, making the death-rate 25 per 1000. Diseases of the chest caused 80 deaths and zymotic diseases 7, of which 5 were due to measles. The intimations for the week were: typhoid fever, 3; diphtheria, 2; small-pox, 1; scarlet fever, 60; and measles, 210. The number of deaths in Leith last week was 40, making the death-rate 29·43 per 1000. Seven of the deaths were from measles.

Edinburgh Medico-Chirurgical Society.

At the meeting of this society, held last week, Dr. A. G. Miller showed a case of Colotomy which he had operated on three years before. Dr. Lockhart Gillespie read a paper on Some Practical Results from the Investigation of the Contents of the Stomach, which gave rise to considerable discussion.

Jan. 24th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Professor Emerson Reynolds, M.D. Dub., F.R.S.

THE Council of the British Association has nominated Dr. Emerson Reynolds, Professor of Chemistry in the University of Dublin, to be President of Section B (Chemical Science) for the meeting of the Association at Nottingham in September. Professor Reynolds has been appointed by the Senate of Cambridge University Tripos Examiner in Chemical Philosophy for this year.

Rathdown Union.

At a recent meeting the guardians elected Dr. O'Flaherty and Mr. Newland superintendent medical officers under the cholera regulations for this union, in the place of Mr. Byrne Power. As, however, the latter gentleman was not dismissed, the appointments were illegal, and the guardians, after a protracted discussion, reappointed Mr. Byrne Power until Dec. 31st next, the limitation clause being carried by 15 votes to 12. Mr. Newland, it must be mentioned, refused, on professional grounds, to accept the appointment.

Cork District Lunatic Asylum.

At a meeting of the governors the report of Dr. G. O'Farrell, Inspector of Lunatic Asylums, of inspections held on Nov. 27th and 28th last was before the board. During the year there were eighty-two deaths. The large number of 158 accidents was recorded, which included ten serious fractures and dislocations, which can only be accounted for by the want of room, which necessarily tends to turmoil and acts of violence amongst the excitable patients. The administration of the asylum is at present carried on under very great difficulties, owing to the overcrowding which exists. A considerable sum of money has been spent during the last few years in providing new furniture, bedding for the wards, in improving the patients' clothing and in giving them extra comforts. This expenditure probably explains the low death-rate for the past two years, the lowest, it is believed, on the asylum records. Amongst the improvements considered necessary by Dr. O'Farrell are the provision of observation wards, dormitories for the protection of suicidal and dangerous patients, the enlargement of the windows on the ground floor at the back of the house so as to improve their light and ventilation, and the setting apart of accommodation for the isolation of zymotic and infectious diseases. Some of these improvements he suggests might be usefully carried out, in whole or in part, without having recourse to a Treasury loan by employing asylum labour, directed and assisted by a few skilled artisans. This system of carrying out improvements which do not necessitate very great structural alterations has been most successfully adopted in many of our Irish asylums. For instance, at Limerick an observation dormitory accommodating forty-four female patients has just been completed entirely by asylum labour. The structure can compare favourably with the observation dormitories of any of the newest English or Scotch asylums.

Singular Football Casualty.

A lad named Kennedy met with a strange accident last week at Shrigley, near Killyleagh, which terminated fatally. He trod by accident on a piece of glass which was lying on the ground and injured an artery. Medical aid was obtained, but death took place two days afterwards.

Mr. Alexander Lane, M.R.C.S., has obtained the Fellowship of the Royal College of Surgeons in Ireland.

January 24th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Deaths of Distinguished French Medical Men.

DEATH, that great leveller of distinctions, has been particularly busy of late, counting amongst his recent victims three well-known Paris clinicians. This morning I attended the funeral of the best known of the trio—Professor Hardy. Next week I hope to give some details of his active professional life, passed mostly, as all know, in the dermatological wards of St. Louis. When I reached the Madeleine the *cortège* had just arrived from his house close by, and the Professors and *Professeurs agrégés* of the Faculty were filing past the flower-laden hearse. The procession, as it wended its way up the steps into the church, presented an imposing appearance, each of the deceased's colleagues wearing his gorgeous robes. Inside the church the altar and the catafalque were ablaze with lighted candles, and the solemn strains of the organ and the full choir rendered the solemnity most impressive. Of the two other teachers who have lately disappeared from amongst us Dr. Horteloup was the better known. A pupil of Nélaton, he became surgeon of the Midi Hospital for Venereal Diseases. Here he founded a wax museum, which bears his name. From this establishment he migrated successively to the Maison de Santé and the Necker Hospital, where he occupied the post of chief of the Service de la Fondation Civiale, his speciality being the diseases of the genito-urinary tract. He was a prolific writer. Another figure familiar to all visitors to the Charité Hospital has disappeared in the person of Dr. Desnos. Despite the brusqueness of his manner, he was a great favourite and an excellent teacher. The list of his contributions to medical literature is a very long one, most of his writings bearing upon diseases of the nervous system.

A Medical Minister.

It may not be generally known that the post vacated by M. Develle at the Ministry of Agriculture by his assumption of the duties of Minister of Foreign Affairs is now filled by a medical *confrère*, Dr. Viger. The new Minister has for years taken great interest in agriculture. He is Deputy for the Loiret Department and Vice-President of the Customs Commission.

Changes at the Faculty of Medicine.

The retirement of Professor Verneuil having created a vacancy in the chair of Clinical Surgery, Dr. Tillaux, already Professor of Operative Surgery, has been selected to replace him and Dr. Terrier becomes the occupant of the chair of Operative Surgery.

Paris, Jan. 25th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Outbreak of Cholera in the Nietleben Asylum, near Halle.

THE *Saale Zeitung* (a well-known Halle paper) printed the following on the 16th inst.: "During the last three days eighteen cases of cholera-like disease with seven deaths have occurred in the lunatic asylum at Nietleben. The first death occurred after a short illness at about noon on Sunday and three other patients died on the same day with similar symptoms. As the disease kept spreading and three further deaths occurred, the establishment was at once carefully isolated to prevent the spread of the contagion beyond its walls. Professor Renk, director of the Hygienic Institute here, was able to finish the bacteriological investigations in only one case by noon to-day. In the contents of the intestine of the patient who died at noon on Sunday the bacilli of cholera nostras (Finkler-Prior bacilli) were found. According to a later report two further investigations have had the same result. We may now presume with considerable confidence that the disease in the cases in question was only cholera nostras. It is true that so violent an outbreak is unusual in weather so cold as the present. The cause is probably to be sought in local circumstances and in the fact that persons suffering from mental disease are more subject to disorder of the digestive organs than others. The legal official of the district reported to the Imperial Officer of Health yesterday. No further deaths have occurred and the number of cases seems to be diminishing." In the night of the 16th seven deaths were reported, and six more in that of the 17th. In the evening of the 18th Professor Renk ascertained that the disease was really Asiatic cholera and the legal official of the district published the fact next day. Professor Koch arrived at Nietleben on the 18th with his son-in-law, Professor Pfuhl, and his assistant, Dr. Frosch. Soon after their arrival the use of the water of the asylum for cooking and drinking was forbidden and stricter isolation was ordered. A day or two later it was given out that, according to Dr. Koch's investigations, the water of the Saale below Nietleben was to be regarded with suspicion. By the 21st 66 cases and 22 deaths are reported to have occurred in the asylum but none either in the village of Nietleben or in the neighbouring

city of Halle. The above figures, however, must be taken with caution, for it is officially stated that 37 cases and 19 deaths had occurred by the 20th, and that 25 other cases were suspicious.

Cholera in Hamburg.

Four cases of cholera were reported from Hamburg last week. Three of the patients were negroes on board a ship in the river. The Senate of Hamburg has proposed to the city deputies a grant of 2,300,000 marks (shillings) for the construction of central sand filters, as the 6,725,000 marks originally granted for this purpose have proved insufficient.

January 23rd.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Cholera in Austria-Hungary.

THE Budapest hospital for cholera, which had been closed during the first week of January, had to be opened again, and some cases of cholera were admitted last week. Notwithstanding the severe cold prevailing over the whole empire, cholera cases were also reported from some Galician villages near the Russian frontier, and the sanitary authorities fear an outbreak of the epidemic next spring.

Diphtheria in Hungary.

It is well known that the sanitary conditions of Hungary are not the best in Europe, but medical circles were somewhat surprised by a recent statement made in Hungarian journals to the effect that 23,070 cases of diphtheria with 9137 deaths had occurred during the year 1892 in Hungary. Trachoma is another infectious disease met with very frequently in that country, and the endemics of malarial fever prevailing in many districts are reducing considerably the powers of resistance of many individuals.

Intubation of the Larynx in the Adult.

In a recent paper published in a Vienna medical journal Professor Maydl recommended the use of O'Dwyer's intubation for surgical operations in the throat and neighbourhood to prevent the entrance of blood into the air passages. With this object in view he employs slightly modified tubes.

Craniectomy for Microcephaly.

At the last meeting of the Vienna Medical Association a case of craniectomy was shown by Dr. Gersuny. It was that of a child aged thirteen months, who had suffered from epileptic fits since the fourth month of life. The skull was trephined, after which the fits decreased in number and intensity. Five months after the operation only slight fits occurred at long intervals.

January 22nd.

Obituary.

PROFESSOR CASIMIRO MANASSEI.

THE chair of "Clinical Dermosyphilopathy" in Rome has just been rendered vacant by the death of its able occupant, the Commendatore Casimiro Manassei, who died on the night of the 14th inst. All next day the University hoisted the national colours half-mast high, in token of its respect for the deceased professor, who held the rank of Dean in the Senatus Academicus. Dr. Manassei early distinguished himself, not only at the Roman University but during the defence of the city in 1849, when Garibaldi held the Janiculan against the forces of the French Republic. He acted as surgeon to the gallant little army of the Triumvirate, and his skill was often *en évidence*, particularly under fire. He was a master in his department—that of venereal disease—in the widest acceptation of the term; and, besides the University chair devoted to it, he filled the post of director of the Servizi Sanitarii Celtici (syphilitic sanitary service) in the great hospital of the San Gallicano. In 1886 he founded the Società Dermatologica e Syphilografica and, till his death, acted as its president. His writings on the disease in question are numerous, able and original, and procured him not a few marks of distinction from medical associations, Italian and foreign. Beloved by his pupils and respected by his colleagues in the University and the profession at large, he was followed on Monday the 16th inst. to the grave by many mourners, conspicuous amongst whom were his fellow-members of the Consiglio Accademico Universitario and his brethren of the Masonic Loggia Universo, in which he held high office.

ROYAL COLLEGE OF PHYSICIANS.

AN ordinary meeting of the Comitia was held on Thursday, Jan. 26th, Sir Andrew Clark, President, in the chair.

It was announced that a portrait of a former President (Sir Henry Halford) had recently been presented to the College; also that some of his unpublished literary works had been placed in the hands of the librarian.

The following were then admitted as Members of the College: P. R. Dodwell, M.D.Lond. (elect), L.R.C.P.; R. F. Fox, M.D.Lond.; W. K. Fyffe, M.B.Camb.; A. E. Giles, M.D.Lond. (elect); A. Newsholme, M.D.Lond.; J. W. Russell, M.D.Camb.; W. J. R. Simpson, M.D.Aberd.; C. H. Thompson, M.D.Dublin, L.R.C.P.; F. P. Weaver, M.D.Lond.

Licences to practise and diplomas in Public Health were granted conjointly with the Royal College of Surgeons.

Formal communications from the Royal College of Surgeons were received.

The Royal Horticultural Society sent copies of resolutions passed at the Society, relative to the prevalence of fogs in London and their influence on cultivated plants.

The University of Padua having invited the College to send a representative to the Tercentenary Commemoration of Galileo, the President announced that he had asked Sir Joseph Fayrer to represent the College, and his report upon the proceedings on that interesting occasion was read. The thanks of the College were accorded to him, and also to Dr. Perry, who had prepared the address in Latin which was delivered at the commemoration.

Dr. Pavy received the thanks of the College for having represented it at the celebration of M. Pasteur's seventieth birthday.

The report of the Committee on Chinese Drugs was read, announcing that the quantities received were insufficient for experimental research.

Dr. Marcet, Dr. Wadham, Dr. Cholmeley and Dr. T. H. Green were elected councillors, in the room of Dr. Bridges, Dr. Gee, Dr. Buzzard and Dr. Payne, who retire by rotation.

After other formal business the Comitia adjourned.

Medical News.

FOOTBALL CASUALTY.—A young man aged twenty died on the 20th inst. from injuries received at an Association match, played at Haydon, Northumberland, between the Hexham Excelsior and Haydon Bridge Clubs.

OPHTHALMIC INSTITUTION, WORCESTER.—The annual report just issued is satisfactory and shows the increasing utility of the charity. The amalgamation of the institution with the Worcester Infirmary had been suggested and a conference held, but the committee of the former were not prepared to recommend at present the proposed amalgamation. The invested capital fund now amounted to £2002 8*s.* 10*d.*

UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE, CARDIFF.—On Wednesday last the prizes gained by the successful students of this College were presented by the Dean of Llandaff. The students at the College, it was stated, numbered 300, and most gratifying progress had been made during the session 1891-92, the number of students who successfully passed the degree examinations of the University of London last October being larger than that of any college in the United Kingdom. Lord Aberdare, who presided, expressed his satisfaction that the excellent educational work hitherto done had been accomplished without the aid of intermediate schools, as, with the infinitely better conditions which would be brought about by the intermediate education system, much more important results would be achieved. It was stated that the new medical school would be opened next October.

MEDICAL MAGISTRATES.—Mr. William Hodgson, L.R.C.P. Irel., L.F.P.S. Glasg., of Crewe, has been placed on the Commission of the Peace for that borough, and Messrs. E. Glynn, L.K.Q.C.P., L.R.C.S. Irel., and A. H. Bennett, M.B., C.M. Aberd., have been appointed Justices of the Peace for Kapunda, South Australia.

CHOLERA PRECAUTIONS.—The Lord Mayor of London has addressed a circular letter to all the mayors and provosts of the United Kingdom inviting their attention to the necessity of having nurses specially trained to nurse cases of cholera should the epidemic, which is said to be imminent, unhappily reach our shores in the spring. It is proposed to have such nurses enrolled in order to secure their harmonious coöperation with the various local sanitary authorities, and the mayors and provosts throughout the United Kingdom are invited to render their aid in furthering the project.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—On Wednesday, Jan. 11th, a quarterly court of the directors of this Society was held. Mr. Tegart, vice-president, took the chair, the president, Sir James Paget, being prevented from attending. It was resolved that a sum of £1244 10*s.* should be distributed amongst the fifty-seven widows, twelve orphans, and the four orphans on the Copeland Fund. The expenses of the quarter were £73 15*s.* 6*d.* One new member was elected and the deaths of five were reported. There were no fresh applications for assistance. The death of a widow was announced who had been in receipt of £35 per annum since 1866, her husband having only paid 8 guineas as subscriptions A Christmas present amounting to £334 had been given on Dec. 19th to the widows and orphans on the funds.

BEQUESTS AND DONATIONS TO HOSPITALS.—The late Hon. Mrs. Georgina A. H. Godolphin Osborne bequeathed £100 each to the St. George's Hospital, St. Mary's Hospital, the Royal Hospital for Incurables, Putney Heath, and the National Hospital for the Paralysed and Epileptic, Queen-square, Bloomsbury.—Mr. George Trimmer, late of Farnham, Surrey, bequeathed £500 to the Surrey County Hospital at Guildford and £15,000 for a cottage hospital, to be called "Trimmer's Cottage Hospital."—The Rev. James Spurrell, late of Adelaide-crescent, Hove, Sussex, bequeathed £30,000 to the Sussex County Hospital, Brighton, £4000 each to the Brompton Hospital for Consumption and the Hospital for Incurables at Putney, and £2000 to the Brighton and Hove Dispensary.—Mr. Samuel Baruch Halle, late of Gloucester-street, Pimlico, bequeathed £100 to the Royal Westminster Ophthalmic Hospital, and the residue of his property the testator leaves in trust for distribution in equal shares to the Royal Westminster Ophthalmic Hospital, the Fulham Cancer Hospital, the Royal Free Hospital and the Hospital for Diseases of the Throat in Golden-square.—The late Mr. Wm. Holland of Higher Broughton bequeathed £100 to the Clinical Hospital for Diseases of Women and Children, Cheetham, £200 to the Hospital for Incurables, Mauldeth Hall, and £100 to the Ardwick and Ancoats Dispensary.—The Goldsmiths' Livery Company has sent £50 to the Hospital for Epilepsy and Paralysis, Regent's-park. The late Mr. George Pooley, J.P., bequeathed £200 to the Windsor Royal Dispensary and Infirmary. Mrs. Jane Easton, late of North-terrace, Ripon, bequeathed £1000 to the Ripon Dispensary and Cottage Hospital.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ANDERSON, JAMES, M.D. Aberd., F.R.C.P. Lond., has been appointed Physician to Out-patients, National Hospital for the Paralysed and Epileptic, Queen-square, Bloomsbury.

ANDERSON, JOHN, M.D., Ch.M. Aberd., has been appointed Public Vaccinator at Branxholme and Health Officer for Portland Shire, E.R., Victoria, Australia.

ARCHER, A. M., M.D., B.Ch. Dub., has been reappointed Medical Officer for the North-West Sanitary District of the Chester Union.

BAKER, JAS. P., L.R.C.P., L.R.C.S., F.R.C.S. Edin., has been appointed Public Vaccinator for the District of Pelorus, New Zealand.

BENNETT, A. H., M.B., C.M. Aberd., has been appointed a Public Vaccinator for Kapunda, South Australia.

BOWKER, C. S., M.R.C.S., L.R.C.P. Lond., has been appointed Government Medical Officer and Vaccinator for the District of Murrumburrah, New South Wales.

BURR, W. T., M.B. T.C.D., M.Ch. Dub., has been reappointed Medical Officer for the Gamlingay Sanitary District of the Caxton and Arrington Union.

CARNALL, E., M.R.C.S., L.R.C.P., L.S.A., has been appointed Visiting Medical Officer to the Westminster Dispensary, Gerrard-street, W.

CARRUTHERS, J. F., M.B., C.M. Edin., has been appointed Medical Officer for the Renesby Sanitary District of the Horncastle Union.

FLORANCE, JAS. W., M.D., Ch.B. Melb., has been appointed Health Officer for the District of Mooroopna, Victoria, South Australia.

FOX, EDWARD J., M.B., C.M. Edin., has been appointed Junior House Surgeon at Stanley Hospital, Liverpool, vice Gornall, resigned.

GANDEVIA, N. B., M.R.C.S., L.R.C.P. Lond., has been appointed Health Officer for Coleraine, Victoria, South Australia.

GARTH, H. C., M.B., C.M., has been reappointed Senior Resident Medical Officer to the Miller Hospital and Royal Kent Dispensary.

GOTLA, F. S., L.M.S. Bombay, L.R.C.P., L.R.C.S., has been appointed, *pro tem.*, Medical Officer for the Parish of Brakadale, Skye.

GRANGE, W. D'O., M.D., C.M. Edin., has been appointed Medical Officer for the Burgh of Moffat, vice Munro, resigned.

JOHNSON, WM., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Public Vaccinator for Avoca, South Australia.

JOSHUA, F. W., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer to the Great Malvern Samaritan Charity.

KENNEDY, J. B., M.D. Kingston, Ontario, M.C.P.S. Ont., has been appointed a Public Vaccinator in South Australia.

LALTER, CECIL, B.A., M.B., B.C. Cantab., has been appointed Assistant Medical Officer to the Western Fever Hospital.

LOCKING, BENJN., L.R.C.P. Lond., M.R.C.S., has been appointed an additional Public Vaccinator for the District of Opotiki, New Zealand.

LOUIS, HY., M.D. Melb., L.R.C.P. Lond., has been appointed an Honorary Physician to the Melbourne (Victoria) Dental Hospital.

MACDONALD, GREVILLE, M.D. Lond., has been appointed Assistant Physician for Diseases of the Throat, King's College Hospital.

MACKAY, WM., M.B., Ch.M. Edin., has been appointed Health Officer for Portland Shire, W. R., Victoria, South Australia.

MCKINNON, ARCHD. A., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon at the Central London Ophthalmic Hospital, Gray's-inn-road, W.C.

MARSHALL, G. A., M.B., Ch.B. Dub., has been appointed Surgeon on the Medical Staff, with the rank of Lieutenant, and to be attached to the New South Wales Mounted Infantry Regiment.

MILL, WM., M.B., Ch.M. Edin., has been appointed Public Vaccinator for Ross, New Zealand.

MITCHELL, H. ST. JOHN, L.R.C.P. Edin., L.F.P.S. Glasg., has been appointed Health Officer for Swan Hill Shire, Victoria, South Australia.

NORTON, G. EVERITT, M.R.C.S., has been appointed Resident Medical Officer of the City-road Workhouse, Holborn Union.

O'DOHERTY, K. J., F.R.C.S., L.M. K.Q.C.P. Irel., has been appointed Superintendent of the Quarantine Station at Peel Island, and Visiting Surgeon at the Diamantina Orphanage, Queensland.

PEARSE, F. E., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Ripley Sanitary District of the Guildford Union.

POTTS, WALTER A. B., M.R.C.S., has been appointed Health Officer for Harrow, Victoria, South Australia.

PRICE, R. G., M.D., L.R.C.P., has been appointed Certifying Factory Surgeon, Carmarthen, vice J. D. Rowlands, deceased.

RANKIN, WM. B., F.R.C.S. Edin., has been appointed Public Vaccinator for St. Kilda, West, vice Davenport, resigned.

ROCK, CECIL, M.R.C.S., L.R.C.P., has been appointed Junior Resident Medical Officer to the Miller Hospital and Royal Kent Dispensary, vice F. S. Noble, resigned.

STRUTHERS, JAMES, M.D., Ch.M. Aberd., has been appointed Government Medical Officer and Vaccinator for the District of Rylstone, New South Wales.

SUTHERLAND, ALEX., M.B., Ch.B. Melb., L.R.C.S., L.R.C.P. Edin., has been appointed Public Vaccinator for Yan Yean and Whittlesea, Victoria, Australia.

SUTTON, CHAS. S., M.B., Ch.B. Melb., has been appointed Public Vaccinator at Terang, Victoria, Australia, vice Marchbank, resigned.

WATSON, D., M.B., C.M. Glasg., has been appointed Medical Officer for the Twelfth Sanitary District of the Wisbech Union.

WEDGWOOD, W. B., M.R.C.S., has been appointed Medical Officer for the North Sanitary District and the Workhouse of the King's Lynn Union.

WHITING, ARTHUR J., M.D. Edin., has been appointed Junior House Physician to the National Hospital for the Paralysed and Epileptic, vice G. M. Wood, appointed Senior.

WOOD, GUY M., M.B. Durh., M.R.C.S., L.R.C.P., has been appointed Senior House Physician to the National Hospital for the Paralysed and Epileptic, vice H. M. Bowman, resigned.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BOROUGH HOSPITAL, Birkenhead.—Junior House Surgeon. Salary £60 per annum, with board and lodging, but no wine, spirits or beer.

BOSCOMBE HOSPITAL, Bournemouth.—House Surgeon (unmarried). Salary £60, with board and residence.

BURY DISPENSARY HOSPITAL, Bury, Lancashire.—Junior House Surgeon. Salary £60 per annum, with board, residence and attendance.

CHELTENHAM GENERAL HOSPITAL.—Junior House Surgeon (unmarried). Salary £40 per annum, with board and apartments.

DUNDEE ROYAL INFIRMARY.—Medical Superintendent.

EPSOM UNION.—Medical Officer and Public Vaccinator for the District of Ewell, Chessington and Cuddington. Salary £70 per annum, exclusive of the usual fees for midwifery cases and certain surgical operations. (Applications in writing to the Clerk to the Guardians, Lonsdale, Epsom.)

HULME DISPENSARY, Dale-street, Stretford-road, Manchester.—House Surgeon. Salary £130 per annum, with apartments, attendance, coals and gas.

NATIONAL HOSPITAL FOR DISEASES OF THE HEART AND PARALYSIS, 32, Soho-square, London.—Ophthalmic Surgeon, Pathologist and Anæsthetist.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (ALBANY MEMORIAL), Queen-square, Bloomsbury.—Assistant Physician.

ROYAL SOUTH HANTS INFIRMARY, Southampton.—Assistant House Surgeon. Board and rooms provided.

STOCKPORT INFIRMARY.—Junior Assistant House Surgeon, for six months. Board and residence provided. An honorarium of £10 will be given after six months' satisfactory service.

UNIVERSITY OF EDINBURGH.—Examiners.

WEST HERTS INFIRMARY, Hemel Hempstead.—House Surgeon and Dispenser, who shall also be Assistant Secretary, for two years. Salary £100 per annum, with board, furnished rooms, free light, attendance and washing.

Births, Marriages and Deaths.

BIRTHS.

BRAINE.—On Jan. 21st, at Oxford-gardens, North Kensington, the wife of Charles Carter Braine, F.R.C.S., of a son.

BUXTON.—On Jan. 20th, at Mortimer-street, Cavendish-square, W., the wife of Dudley Wilmot Buxton, Esq., M.D., M.R.C.P., of a son.

CANTLIE.—On Dec. 11th, 1892, at the Peak, Hong Kong, the wife of James Cantlie, M.B., F.R.C.S., of a son.

GREEN.—On Jan. 24th, at Grange Mount, Birkenhead, the wife of Dr. C. Theodore Green, of a son.

HARRIS.—On Jan. 16th, at Outram-terrace, Devonport, the wife of Surgeon-Captain F. W. H. Davie Harris, Army Medical Staff, of a son.

LLOYD.—On Nov. 24th, 1892, at Hunter's-hill, Sydney, New South Wales, the wife of H. Saunderson Lloyd, M.B., of a daughter.

LOVEGROVE.—On Jan. 15th, at Fernbank, Wandsworth-common, S.W., the wife of T. E. Lovegrove, M.R.C.S., of a daughter.

NICOL.—On Jan. 19th, at Biarritz, the wife of Dr. Nicol, of Springgarden, Jamaica, and Elm-park-gardens, S.W., of a son.

POLAND.—On Jan. 20th, at St. Thomas's-street, London-bridge, S.E., the wife of John Poland, F.R.C.S., of a son.

WARREN.—On Jan. 18th, at Home Villa, Headcorn, Kent, the wife of Dr. P. Somerville Warren, of a son.

WILDING.—On Jan. 19th, at The Hawthorns, Hindley, near Wigan, the wife of Walter F. W. Wilding, M.R.C.S., L.R.C.P., of a daughter.

WREFORD.—On Jan. 17th, at Clapham-road, the wife of Samuel Wreford, M.R.C.S., of a daughter.

YOUNGER.—On the 22nd inst., at 19, Mecklenburgh-square, W.C., the wife of E. G. Younger, M.D., of a son.

MARRIAGES.

ANDRÉ—FOWLER.—On Jan. 18th, at St. Mark's, Hamilton-terrace, by the Rev. Canon Duckworth, James Edward Felix André, M.R.C.S., L.R.C.P., of Sidlesham, Chichester, to Dorathea Kate, daughter of the Rev. Henry Fowler, M.A., of St. Albans, Herts.

BRICE—HOSKINS.—On Jan. 18th, at St. Paul's Church, Deptford, Surgeon Fredrick A. Brice, R.N., of H.M.S. *Victory*, son of the late Deputy-Inspector-General Fredrick A. Brice, R.N., to Mabel Maud, eldest daughter of Francis R. Hoskins, of the Royal Victoria Yard, Deptford.

BRIGHT—CLERK.—On Jan. 17th, at St. John's Chapel, Rolleston, Leicestershire, by the Right Reverend the Lord Bishop of Winchester, uncle of the bride, assisted by the Rev. Elgar Hicks, Vicar of Billesdon, Arthur John Addison, eldest son of John M. Bright, M.D., of Park-hill, Forest-hill, Kent, and godson of the late Thomas Addison M.D., Physician to Guy's Hospital, to Mabel Gertrude, younger daughter of John Clerk, Esq., Q.C., of Rolleston Hall.

KERR—COLLINGS.—On the 21st inst., at S. Philip's, Earl's-court, Kensington, by the Rev. J. Blackbourne, Vicar of Keelby, Lincolnshire, assisted by the Rev. Wm. Smale, M.A., Vicar of S. Philip's, D. Oliver Kerr, M.B., C.M., of Keelby, son of the late Rev. D. Kerr, M.A., of Dunse, N.B., to Amy Frances Millicent (Millie), second daughter of Robert Collings, late of the Admiralty.

LUFF—LEON.—On Jan. 24th, Arthur P. Luff, M.D., M.R.C.P., of Weymouth-street, W., to Amy, younger daughter of the late G. I. Leon, of Portland-place, W.

ROSS—SERVAES.—On Jan. 18th, at Christ Church, Linnet-lane, Liverpool, Arthur Macleod Ross, M.B., C.M. Edin., F.R.C.S., of Woodbourne, Aigburth, Liverpool, to Susie Frances, eldest daughter of Julius Servaes, Esq., of Holly Lee, Sefton-park, Liverpool.

DEATHS.

ANDERSON.—On Jan. 17th, at Iver, Bucks, James Anderson, L.R.C.P.I., F.P.S., late of Calcutta, aged 45.

ANDERSON.—On Jan 14th, at his residence, Oxford-street, Liverpool, Joseph Anderson, M.D., L.R.C.S. Edin., aged 87.

BURMAN.—On Jan. 21st, at Bishopton Lodge, Stratford-on-Avon, Thos. Southam Burman, M.R.C.S., L.S.A., in the 78th year of his age.

JAGO.—On Jan. 18th, at Robartes-terrace, Truro, James Jago, M.D. Oxon., F.R.S., aged 77.

POWELL.—On Jan. 23rd, Harold Macaulay Powell, M.R.C.S., of Merton-road, Wimbledon, aged 40.

ROGERS.—On Jan. 21st, at Great Stanmore, William Andrews Rogers, M.B., B.A. Camb., M.R.C.S., in his 69th year.

THOMPSON.—On the 9th inst., at the residence of her son, 66, Great Queen-street, Holborn, Martha Fanny, widow of the late Samuel Thompson, M.R.C.S.E., L.S.A., of Knottingley, Yorkshire, of acute pneumonia.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages and Deaths.

Medical Diary for the ensuing Week.

Monday, January 30.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays, at the same hour.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; and on Tuesday, Wednesday, Friday, and Saturday at the same hour.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M.; and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2 P.M.; Thursday, 2.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.; and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M. Eye Department, 2 P.M.

LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital: 1 P.M., Mr. A. Stanford Morton: Affections of Eyelids.—101, Great Russell-st.: 8 P.M., Dr. Galloway: Lung Lesions. Parkes Museum (Margaret-st., W.): 3.30 P.M., Dr. Parkes: House Drainage.

CENTRAL LONDON THROAT AND EAR HOSPITAL (Gray's Inn-road).—5 P.M. Mr. Lennox Browne: Disease of the Accessory Cavities. (Post-graduate Course.)

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Clinical Evening. The President: Case of Leprosy.—Dr. Hadden: Case of Extreme Defect of Speech in a Child.—Mr. H. Allingham: (1) Compound Fracture of the Skull treated by Trephining; (2) Inguinal Colotomy.—Mr. Stonham: (1) Congenital Sacral Tumour; (2) Keloid.—Mr. Lockwood: Ulceration of Auricles.—Mr. Startin: Acne Keloid.—Dr. Pasteur: Pseudo-hypertrophic Paralysis.—Mr. Sheild: A Case for Diagnosis.—The President will exhibit some recently executed drawings illustrating various diseases, and Dr. Guthrie will show the Intestines of an Infant who died at the age of six weeks from the effects of Umbilical Fistula.

Tuesday, January 31.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Skin Department, 1.45; Saturday, 9.15.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Prof. V. Horsley: The Brain.

LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars: 4 P.M., Mr. J. Hutchinson: Pityriasis Rosea, and on Porrigo.—Bethlem Hospital: 2 P.M., Dr. Theo. Hyalop: Stupor and Dementia.—101, Gt. Russell-st.: 8 P.M., Dr. Potter: Chloroform in Labour.

PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Dr. S. W. Wheaton: Preparations from the Organs in a Case of West African "Blackwater" Fever.—Dr. G. N. Pitt: (1) Thrombosis of the Pulmonary Artery without Infarction; (2) Arterio-venous Aneurysm connected with Iliac Vessels at their Origin.—Mr. H. Betham Robinson: (1) Rodent Ulcer of the Male Breast; (2) Calcifying Parotid Tumour.—Dr. W. Hale White: Fibroid Degeneration of the Whole of the Endocardium of the Right Ventricle.—Mr. J. Hutchinson, jun.: Melanotic Carcinoma of the Skin.

Wednesday, February 1.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1.30 P.M.; Saturdays, 2 P.M. Obstetrical Operations, Thursdays, 2 P.M.

CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M.; Thursday and Saturday, same hour.

ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M. Dental Department, 9.30 A.M. Eye Department, 2 P.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M. Surgical Visits on Wednesday and Saturday at 9.15 A.M.

LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Mr. Rickman Godlee: Surgical Affections complicating Phthisis.—Royal London Ophthalmic Hospital: 8 P.M., Mr. A. Q. Silcock: Choroidal Disease, with Illustrative Cases.

OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Dr. W. S. A. Griffith and others.—Annual meeting. The President (Dr. J. Watt Black) will deliver the Annual Address.

Thursday, February 2.

ST GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M. Ear and Throat Department, 9 A.M. Eye Department, 2 P.M.

LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Great Ormond-st.: 4 P.M., Dr. Barlow: Food Diseases of Infancy.—National Hospital for the Paralysed and Epileptic: 2 P.M., Dr. Buzzard: Cases in the Hospital.—London Throat Hospital (Gt. Portland-st.): 8 P.M., Mr. George Stoker: Chronic Glandular Diseases of the Nose and Naso-pharynx.—Central London Sick Asylum: 5.30 P.M., Mr. J. Hutchinson: Cases in the Wards.

CENTRAL LONDON THROAT AND EAR HOSPITAL (Gray's Inn-road).—5 P.M. Dr. Dundas Grant: Chronic Non-suppurative Inflammation of the Middle Ear.

HARVEIAN SOCIETY.—Mr. Edmund Owen: Post-nasal Growths in Children. Cases of post-nasal disease will be shown.

Friday, February 3.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Eye Department, 2 P.M.
LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. Percy Kidd: Tubercular Affections of the Throat.—Bacteriological Laboratory, King's College: 11 A.M. to 1 P.M., Prof. Crookshank: Anthrax (Gram's Method).
LONDON SKIN HOSPITAL (40, Fitzroy-sq., W.).—3 P.M. Dr. E. J. Barry: Seborrhœa and its Treatment.
WEST LONDON MEDICO-CHIRURGICAL SOCIETY (West London Hospital).—8.30 P.M. Pathological Specimens by Mr. Swinford Edwards, Mr. R. F. Benham and others. Dr. Henry Sutherland: Demonstration of the Various Methods of Artificially Feeding the Insane.—Dr. Archibald Garrod: Notes on some of the Phenomena of Chlorosis.—Dr. A. B. Blacker and Dr. R. H. Clarke: Light from a Medical Point of View.

Saturday, February 4.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.
LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 11 A.M., Dr. H. Corner: Insanity of Puberty and Adolescence.

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

PUBLISHER'S NOTICE.

IN order to facilitate the work of reference to the volumes of THE LANCET, we have arranged in the future to publish duplicate copies of the Index to each half-yearly volume in a form in which they may be subsequently filed or bound together.

We have had a large number of duplicate copies of the Index to the last half-yearly volume printed, and those of our subscribers who may wish to be supplied with loose copies can obtain the same (without extra charge) on making application to the Publisher of THE LANCET.

"PREPARING FOR THE INTERNATIONAL MEDICAL CONGRESS."

Inquirer, who wants to gain a working knowledge of Italian on Milton and Locke's method, could not do better than begin with a play of Shakespeare translated by Carlo Rusconi—"Hamlet," for example—published by Le Monnier of Florence, with the English text on one page and a literal, idiomatic and admirably faithful prose version in Italian on the other. A perhaps easier beginning might be made with "Alice's Adventures in Wonderland" and the exquisitely true rendering into Italian by Signor Teodorico Pietrocola Rossetti (cousin of the poet-painter, Dante Gabriel Rossetti). Both the original and translation are published by Macmillan.

POST-MORTEM TABLES.

To the Editors of THE LANCET.

SIRS,—Can any of your readers kindly inform me through your columns what is the best material for the top of a post-mortem table? Glass has been suggested and I should be glad to know whether it is used in the construction of such a table.

I am, Sirs, yours faithfully,

Carlisle, Jan. 22nd, 1893. STEWART LOCKIE, M.D.

AN OLD ENGLISH HOSPITAL.

THE *West Sussex Gazette* has recently given an interesting sketch of an ancient hospital, St. Mary's, or "The Simmery," situated in an out-of-the-way precinct of Chichester. The account of this institution formed the subject of a lecture by the Rev. Canon Tenton, Principal of Chichester Theological College and Custos of the hospital. The lecturer said one of its chief points of interest lay in the fact that it was a surviving specimen of a class of institution called into existence by the needs of the Middle Ages. Originally St. Mary's seems to have been a refuge for the sick and infirm; but, as time wore on, its functions became modified. In a very early document, dating about the time of Henry VI., it was spoken of as having existed in the city of Chichester "beyond the memory of man." The earliest historical testimony to its existence was dated 1229. Soon after 1253 the original home of the hospital was forsaken in favour of the site which it now occupies, and the present building was erected probably about 1290. In 1582 the constitution of the institution became changed under letters patent granted by Elizabeth. Then in 1656 it was transferred to the Mayor and Corporation, and finally, at the Restoration, it reverted to its original patrons, the dean and chapter. The career of the hospital is chiefly of antiquarian interest. As a hospital proper—that is to say, as a house for the medical treatment of the sick—it was always regarded as a refuge for the necessitous and only subordinately as a place where healing processes might be carried out. Still, as before said, the history of the ancient hospital of St. Mary's, Chichester, has an interest of its own.

Viajaro asks what prospect there is in the United States of America for a practitioner; if some States are better than others; if any examination is required to practise; where would he be likely to obtain information on the subject; and what degrees are required or recognised.

*** If our correspondent will consult our Students' Number he will obtain much valuable information on the subject.—ED. L.

PREVENTING THE BREAKAGE OF CLINICAL THERMOMETERS.

To the Editors of THE LANCET.

SIRS,—I have for years resorted to a very simple method of guarding the bulb of clinical thermometers which I have found very effective. I have cut a piece of soft rubber drainage-tube long enough to cover the bulb and the narrow neck above it and fitting both the bulb and case loosely. This generally remains in the case when the instrument is withdrawn. As an additional precaution I place a pellet of cotton wool at each end of the case. Thus guarded I have found fracture rare even when the case has accidentally fallen on the ground. I have carried a clinical thermometer protected in this manner for years in my waistcoat-pocket.

I am, Sirs, yours truly,

Upper Norwood, Jan. 21st, 1893. K. M'LEOD.

A HOSPITAL FOR DISEASES OF THE EYE IN THE CAUCASUS.

A HOSPITAL for Diseases of the Eye has recently been opened in Tiflis under the patronage of the Czarina. This is the first institution of the kind in the Caucasus. It contains eight large wards besides an operating theatre.

Dr. Cheetham.—Something would depend on the nature of the duties of the medical officer of health. In some districts the duty is assigned to him of attending infectious cases. In any event it would have been well if M. M—— had communicated with the medical officer of health on the subject. The perverseness—not to say the stupidity—of patients who allow themselves or their children to contract small-pox, when they could so easily avoid it, is aggravating to medical men, but when called to such cases they are under the obligations of the profession, which involve attendance on all cases.

A CORRECTION.

To the Editors of THE LANCET.

SIRS,—I find that I made a mistake in the paper I read at the Clinical Society on Rhinoliths in stating that the museum of St. Thomas's Hospital did not possess a specimen. Mr. Clutton informs me that there are two rhinoliths in the museum.

I am, Sirs, your obedient servant,

Wimpole-street, W., Jan. 24th, 1893. F. DE HAVILLAND HALL.

EXAMINATION OF RAILWAY EMPLOYÉS.

To the Editors of THE LANCET.

SIRS,—Could any of your subscribers kindly inform me of a small treatise as a guide in the examination of railway signalmen and recruits, especially as to sight-testing and colour-blindness?

I am, Sirs, yours faithfully,

Jan. 16th, 1893. TYPE.

POISONING BY DISEASED VEAL.

AN account has been given by Dr. E. van Ermengem, Professor of Hygiene and Bacteriology in the University of Ghent, of a series of poisoning cases due to eating veal from two calves which had died from diarrhœa. Eighty persons suffered more or less from symptoms of gastro-enteritis and in four the attack proved fatal. There was no rise or fall of temperature, but in all cases the depression was very marked and convalescence slow. There were also temporary aphonia and petechiæ and other skin affections, but no desquamation. None of the meat seems to have been eaten raw; but, according to the custom of the place, it was both boiled and baked. On examination the intestines of the calves were found to be of a dark-red colour and the livers were enlarged. In the medulla of a bone from one of the animals a bacillus was detected.

A DOCTOR'S BILL OF THE LAST CENTURY.

To the Editors of THE LANCET.

SIRS,—The following bill was disinterred from the vestry of Tudeley Church, near Tonbridge, Kent, a few weeks back. It is remarkable not only for the charges made, but for the wealth of purging draughts, boluses and powders &c. administered in a short period. The poor patient was evidently a difficult subject. His doctor had some distance to go from the adjoining parish of Brenchley to visit him; but still he was constant in his attendance without being excessive in his fee. Mr. Monckton, the practitioner in question, was the son of a surgeon in the same village, who practised there early in the eighteenth century, and whose descendants may still be found there.

I am, Sirs, obediently yours,

Town Clerk's Office, Maidstone, Jan. 20th, 1893. H. M.

G. Larking, Debtor to J. Monckton.

1764.	£	s.	d.
April 9 Journey	0	2	0
,, 11 Purging draught	0	1	0
,, 12 Journey	0	2	0
Opiate pills	0	0	6
,, 13 Journey	0	2	0
Pint of febrifuge decoction	0	2	0
,, 14 Journey	0	2	0
,, 15 Journey	0	2	0
Laxitive bolus ..	0	1	0
Six febrifuge powders	0	1	6
,, 16 Journey	0	2	0
,, 17 Journey	0	2	0
Purging bolus ..	0	1	0
,, 18 Journey	0	2	0
Powders	0	1	6
Purging draught	0	1	0
,, 19 Journey	0	2	0
Cordial mixture..	0	1	6
Cathartic powder	0	0	6
,, 20 Journey	0	2	0
,, 21 Journey	0	2	0
,, 22 Journey	0	2	0
Powders	0	1	6
,, 23 Journey	0	2	0
,, 24 Journey	0	2	0
April 25 Journey	0	2	0
Purging draught	0	1	0
Anodyne draught	0	1	0
,, 26 Journey	0	2	0
,, 27 Journey	0	2	0
Purging draught	0	1	0
,, 28 Journey	0	2	0
,, 29 Journey	0	2	0
Purging draught	0	1	0
,, 30 Journey	0	2	0
May 2 Journey	0	2	0
Cathartic powder	0	0	6
,, 4 Journey	0	2	0
,, 7 Journey	0	2	0
,, 9 Ingredients for cathartic enema	0	1	0
,, 10 Cathartic electary	0	1	6
,, 15 Journey	0	2	0
,, 29 Bleeding	0	0	6
Purging draught	0	1	0
July 21 Bleeding	0	0	6
For amputating his finger and surgical applications and care of his hand..	2	2	0
	£5	12	0

A LARGE THORACIC ANEURYSM.

To the Editors of THE LANCET.

SIRS,—The following case may be instructive and interesting:—Mr. D——, aged forty-six years, had been troubled with pain in the back for four years. About one year ago he had been treated for heart disease with liver congestion. After attending him for some little time my attention was directed by his wife to a swelling on the right side of the vertebral column, where there was pain, and from which place the pain radiated in the direction of the liver; the swelling was on a level with the fourth or fifth dorsal vertebra. On inspection and palpation pulsation was noticed, dulness was easily elicited by percussion, and, on applying the stethoscope, no bruit could be heard, but the heart sounds were heard distinctly in the tumour. The tumour could hardly be said to have been expansile; there was no dyspnœa or dysphagia. It grew rapidly, the patient becoming paler and paler, and an emaciated face with a worn, haggard expression witnessed to the fact that the subject of this tumour was profoundly ill. There would have been no difficulty in diagnosing this from a tumour conveying the pulsations of the aorta had the swelling been on the left of the column. Some time after paraplegic symptoms showed themselves, the patient losing power over defecation and micturition. Urine had to be drawn off twice a day. Bedsores appeared, and on my arriving one morning he rather suddenly expired in my presence. On a post-mortem examination being made a large quantity of slightly blood-stained fluid was found in the right pleural cavity, and lying posteriorly in the cavity were very large clots of blood. The fingers were passed into something which must have been the burst sac of an aneurysm. This case is a little remarkable for a couple of reasons—firstly, a thoracic aneurysm very seldom appears bulging to the right of the vertebral column; and, secondly, I think it is not often that the erosion of bony tissue is so extensive as to allow the tumour to press on the cord. The heads and necks of several ribs and the bodies of one or two vertebræ were felt at the necropsy to have been eaten away.

I am, Sirs, yours truly,

Westminster, Jan. 23rd, 1893. W. A. COLLIER, L.R.C.P. & S.Edin.

THE CLIMATE OF COLORADO.

AT a recent meeting of the members of the Royal Meteorological Society, Dr. Theodore Williams delivered an interesting account of the high altitudes and climate of Colorado. The paper was illustrated by lantern slides, showing views of scenery around the Rocky Mountains, with their lofty peaks and grand cañons, the surrounding district including heights ranging from 5000 to 14,500 feet. Dr. Williams described striking examples of electrical phenomena observed on Pike's Peak (14,147 feet). During one storm the observer was lifted off his feet by the electric fluid, and other phenomena of an impressive character were experienced. The climate of the Parks, Dr. Williams stated, deserves attention. The resorts on the Foot hills and on the prairie plains include Denver, Colorado Springs, Manitou and other health-restoring regions, which can be inhabited all the year round. The rainfall is only about fourteen inches annually, most of which falls during summer thunder-storms, and the sun shines brightly during 330 days of the year. Other features of the climate were recounted, the whole forming a remarkable picture of this part of the American continent.

"CANCER AND SARCOMA CAUSED BY PSOROSPERMS."

To the Editors of THE LANCET.

SIRS,—May I ask you to correct in your next issue a passage in your report of the meeting of the Pathological Society held on Jan. 17th? My own judgment guided me in bringing before the Society a second communication on the above-named subject. I understood Dr. Galloway to say that, for some reason, he would rather I had kept back the communication for a time.

I am, Sirs, yours truly,

J. JACKSON CLARKE.

St. Mary's Hospital Medical School, W., Jan. 23rd, 1893.

THE STUDY OF MEDICINE IN PARIS.

To the Editors of THE LANCET.

SIRS,—I shall be much obliged if some of your correspondents will kindly inform me what steps an English practitioner should take who wishes to spend a month studying in Paris hospitals. Are the fees high? Any information through your columns will be most gratefully received.

I am, Sirs, yours faithfully,

Jan. 24th, 1893. M.D.

ERRATA.—Through an inadvertence in the obituary notice of the late Mr. Baker of Birmingham one of his sons was stated to be Dean of Christ Church, Oxford, a post occupied by Dr. Paget, a son of Sir James Paget. Mr. Baker holds the office of Dean of Pembroke College, Cambridge.—In the report of the case of myelitis simulating hæmatomyelia by its sudden onset &c., published in THE LANCET of Jan. 21st, it is stated on page 142, second column and eleventh line from the bottom—"A rose-coloured spot, resembling a typhoid spot, is seen on the abdomen." The sentence ought to read:—"*Crops* of rose-coloured *spots* resembling typhoid *spots were* seen on the abdomen."

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Jan. 26th, 1893.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 a.m.
Jan. 20	30·33	S.W.	42	41	52	46	39	·01	Overcast
,, 21	30·39	N.W.	39	37	60	46	37	..	Cloudy
,, 22	30·37	N.W	45	44	..	48	39	·04	Raining
,, 23	30·11	W.	46	46	62	52	44	·01	Cloudy
,, 24	30·13	W.	47	46	53	50	46	..	Overcast
,, 25	30·19	W.	41	41	47	45	41	..	Overcast
,, 26	29 93	S.W.	44	43	54	47	38	..	Raining

During the week marked copies of the following newspapers have been received:—*Admiralty, Horse Guards Gazette, Torquay Times, Luton Times, Grantham Journal, Public Ledger (Philadelphia), West Australian (Perth), Hexham Courant, Barry Dock News, Surrey Comet, Evening Reporter, Wit and Wisdom, Cape Argus Weekly, Rochdale Observer, The Cambrian, Hastings Times, Tasmanian Mail, South London Press, Daily Argus, Manchester Evening News, Wolverhampton Express, Newcastle Leader, Western Daily Press, Manchester Guardian, Le Temps (Paris), Pioneer Mail, Time of India, Madras Times, Morning Post, Bath Chronicle, Bolton Herald, Liverpool Mercury, Leeds Mercury, Bristol Mercury, City Press, Mining Journal, Reading Mercury, Local Government Journal, West Middlesex Standard, Weekly Free Press and Aberdeen Herald, Hertfordshire Mercury, Liverpool Daily Post, Yorkshire Post, Surrey Advertiser, Grantham Journal, Sunday Times, Citizen, Builder, Architect.*

Communications, Letters &c. have been received from—

A.—Mr. Armstrong, Hyde-park; Mr. T. Armstrong, London; Messrs. Allen and Hanburys, London; Anxious Parent.

B.—M. Berthier, Paris; Mr. J. M. Burke, co. Tipperary; Mr. G. S. Bigg, Westminster; Mr. W. O. Barsham, Boscombe; Mr. W. T. Brown, Boscombe; Mr. Birchall, Liverpool; Mr. L. B. Bethel, Ohio; Mr. E. Stanmore Bishop, Manchester; Mr. L. Browne, London; Messrs. Brown, Gould and Co., London; Messrs. Bush and Co., London; Messrs. Brady and Martin, Newcastle-on-Tyne.

C.—Dr. Collinson, Preston; Dr. Cantlie, Hong Kong; Dr. Harry Campbell, London; Mr. W. A. Collier, Westmoreland; Mr. J. Jackson Clarke, London; Mr. J. M. Clarke, Clifton; Mr. F. Cooke, Kelvedon; Messrs. J. and A. Churchill, London; Messrs. Crossley, Moir and Co., London; Messrs. Cooper and Holt, London; Capital, London; Cheltenham General Hospital.

D.—Dr. Arthur T. Davies, London; Mr. M. L. Dorington, Wimbledon; Mr. H. Davison, Newburn-on-Tyne.

E.—Dr. W. Easby, Peterborough.

F.—Dr. Fitzgerald, Folkestone; Dr. Frankel, Badenweiler; Mr. R. E. Fanaw, London; Mr. A. Fournet, London; Mr. A. Farr, West Kensington; Mr. G. Fox, Putney.

G.—Dr. Jas. Galloway, London; Dr. Dundas Grant, London; Dr. C. J. Gibson, Godalming; Santanera Dott. Giovanni, Rome; Mr. W. H. Gilbert, Baden Baden; Gardner, Walsall.

H.—Dr. W. D. Halliburton, Gower-street; Dr. F. de Havilland Hall, London; Mr. J. Rutherford Hill, Edinburgh; Dr. John P. Henry, Lewisham; Mr. T. Hopkinson, Nottingham; Mr. W. Hornibrook, London; Mr. Heywood, Manchester; Miss Hooper, London; Mrs. K. Phillips Hicks, London; Messrs. Hooper and Batty, London; H. F S.

I.—Iota, London.

J.—Mr. F. B. Jessett, London; Mr. J. W. Joshua, Great Malvern; J. O. Y.

K.—Dr. R. Kirk, Glasgow; Dr. T. N. Kelynack, Manchester; Brigade Surg.-Lieut.-Col. Keegan, India.

L.—Sir Joseph Lister, London; Dr. Henry Love, Mitcham; Mr. H. Littlewood, Leeds; Mr. H. K. Lewis, London; Mr. W. B. Lewis, Wakefield; London Skin Hospital.

M.—Dr. Modlinski, Russia; Mr. W. H. Maxwell, London; Mr. K. M'Leod, Upper Norwood; Mr. S. B. G. McKinney, Nunhead; Mr. F. H. Moses, Merionethshire; Mr. Williams Marshall, London; Mr. H. Maule, London; Mr. P. Michelli, Greenwich; Messrs. Francis Miller and Co., London; Messrs. Mayer and Meltzer, London; Messrs. Maythorn and Son, Biggleswade; Messrs. Mackey, Mackey and Co., London; Maltine Manufacturing Co., London; Thomas McLean's Gallery, London; M.D., Hammersmith; M.R.C.S.E.; M.D.

N.—Mr. A. Napier, Glasgow; Mr. J. T. C. Nash, Beckenham; Mr. J. S. M. Nurse, St. Kitts, I.W.; Norfolk and Norwich Hospital; National Hospital for the Paralysed, London.

O.—Messrs. Oliver and Boyd, Edinburgh; Messrs. Orridge and Co., London.

P.—Mr. Pendleton, Brighton; Dr. A. E. Permewan, Redruth; Mr. J. Phelan, co. Kilkenny; Mr. L. Phillips, Birmingham; Mr. Pentland, Edinburgh; Mr. Arthur E. Price, Longton; Messrs. Parke, Davis, and Co., London; Messrs. Prickman and Rigdon, Okehampton; Perplexus.

R.—Mr. Carl Ricker, St. Petersburg; Mr. H. Thornhill Roxby, London; Mr. E. Ryall, London; Mr. A. W. Mayo Robson, Leeds; Mr. Lester Reed, Croydon; Mr. John Robertson, St. Helen's; Mr. J. Rankin, St. Monace; Messrs. Robertson and Scott, Edinburgh; Messrs. J. Richardson and Co., Leicester; R. A. J., North Wales; Registrar-General, Edinburgh.

S.—Sir James Sawyer, Birmingham; Dr. Stewart, Clifton; Mr. J. Bland Sutton, London; Dr. J. V. Shoemaker, Philadelphia; Mr. R. W. Savage; Mr. Sidney Spokes, London; Mr. James Stewart, Edinburgh; Mr. J. T. Sarll, London; Mr. H. W. Smith, Leicester; Mr. M. Scott, London; Mr. A. Stournet, London; Mr. C. S. Skerington, London; Charles Slater; Messrs. Street and Co., London; Messrs. Simpkin, Marshall and Co., London; Stockport Infirmary.

T.—Prof. L. Tait, Birmingham; Dr. Tweedy, London; Dr. F. C. Turner, London; Dr. Tonge-Smith, Kettering; Temporary, London.

V.—Mr. Vickers, London; Viajaro, Manchester.

W.—Dr. A. T. H. Waters, Liverpool; Dr. R. T. Williamson, Manchester; Dr. Wetherell, Australia; Mr. H. Wilkinson, Nottingham; Mr. Wand, Leicester; Messrs. Whitworth and Stuart, Manchester.

Letters, each with enclosure, are also acknowledged from—

A.—Mr. W. Armstrong, Carnforth; A. R. T., London; A. M., Sussex; A. B. C., London; A. G., London.

B.—Dr. Bourke, Earl's Court; Mr. W. Butler, Harlesden; Mr. H. Breach, Newbury; Mr. Botwood, Ipswich; Mr. J. Beckton, London; Messrs. Bryant and Co., Toronto; Messrs. Blondeau et Cie., London; Bayswater, London; Bradford Children's Hospital; B. B., London.

C.—Dr. J. Cameron, Bristol; Mr. J. Cochrane, Greenock; Messrs. Cassell and Co., London; Class Rooms, Edinburgh; Church Stretton Asylum; City, London; Carpus, London.

D.—Dr. Delvoix, Dieppe; Mr. G. H. Dickson, London; D., Islington; D. A. S., London.

E.—Mr. F. W. Eurich, Bradford; E. W., London; E. M. D., London.

F.—Mr. H. French, Shoeburyness; Mr. J. Fawcett, Broughton-in-Furness; F. H., London; F. C., London; F. B., London.

G.—Mr. W. A. Griggs, Stamford; Mr. W. F. Gardner, Sydenham; Mr. G. S. Gotla, Skye, N.B.; Gladiolus, London; Grosvenor, London.

H.—Dr. Hollings, Wakefield; Dr. Hume, London; Mr. N. P. Holt, Natal; Mr. G. Howard, Salop; Mr. Harvey, Ventnor; Mr. F. S. Hardwick, Charing; Mr. F. H. Hawley, Lincoln; Hobson, London.

I.—Dr. R. N. Ingle, Jersey; Iota Mu, Fulham.

J.—Dr. Jones, Marske-by-the-Sea; Mr. J. Jackson, Bradford; J., Lorrimore-square.

K.—Mr. J. L. King, Straits Settlements; Mrs. Knott, Hastings.

L.—Dr. Leach, Pembroke; Mr. J. Lodge, Barnsley; Mr. J. M. Laughton, Enfield; Messrs. Lee and Martin, Birmingham; Lady Principal, St. Leonard's; L. H. S.

M.—Dr. McNaught, Manchester; Mr. T. Martin, Bristol; Mrs. Monement, Norfolk; Messrs. Macfarlan and Co., London; Meddyg, London; Medicus, Long Eaton; Medicus, Bristol; Medicus, Stafford; Mozeltoff, Lambeth Palace-road.

O.—Mr. E. A. Oldridge, China; Omega, Paddington.

P.—Mr. T. W. Parry, Ferndale; Messrs. Paige and Grills, Redruth; Platinum, London; Paton, Swansea; P., London; P. Q. R.

R.—Mr. A. R. Robb, Belfast; Mr. R. H. Roberts, Llanberis; Mr. J. A. Rowcroft, Liverpool; Mr. C. H. Reynolds, South Kensington; R. E. K., London; Royal Albert Hospital, Devonport; Rotherham Hospital and Dispensary.

S.—Dr. Sturges, London; Dr. Smythe, Barnsley; Mr. J. F. Somerville, Headcorn; S. Sorabji, Hyderabad; Surgeon, London; Stethoscope, London; Stigma, London; Severn, London.

T.—Mr. W. B. Thorne, London; Mr. W. W. Thompson, co. Wicklow; Mr. Tyte, Minchinhampton; Mr. J. Thin, Edinburgh.

V.—Mr. A. Veitch, Somerset.

W.—Dr. Woodruff, Emsworth; Mr. E. P. Watkins, Notts; Mr. A. W. Wardo, Derby; Mr. L. Williams, Tottenham; Mr. E. Watkins, Notts.

Z.—Zeta, London.

SUBSCRIPTION.

POST FREE TO ANY PART OF THE UNITED KINGDOM.

One Year ..... £1 12 6 | Six Months £0 16 3

TO THE CONTINENT, COLONIES, UNITED STATES, INDIA, CHINA, AND ALL PLACES ABROAD ..... One Year 1 14 8

*** In consequence of the new postal arrangements, the Annual Subscription for India, China, and all foreign countries will now be reduced to £1 14s. 8d., instead of £1 16s. 10d. as formerly.

Post Office Orders and Cheques should be addressed to The Publisher, THE LANCET Office, 423, Strand, London, and crossed "London and Westminster Bank, St. James's-square."

ADVERTISING.

Books and Publications (seven lines and under)	£0 5 0
Official and General Announcements	0 5 0
Trade and Miscellaneous Advertisements	0 4 6
Every additional Line	0 0 6
Front Page per Line	0 1 0
Quarter Page	1 10 0
Half a Page	2 15 0*
An Entire Page	5 5 0

The Publisher cannot hold himself responsible for the return of testimonials &c. sent to the office in reply to advertisements; copies only should be forwarded.

NOTICE.—Advertisers are requested to observe that it is contrary to the Postal Regulations to receive at Post Offices letters addressed to initials only.

An original and novel feature of "THE LANCET General Advertiser" is a special Index to Advertisements on pages 2 and 4, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

Terms for Serial Insertions may be obtained of the Publisher, to whom all letters relating to Advertisements or Subscriptions should be addressed.

THE LANCET can be obtained at all Messrs. W. H. Smith and Son's Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

Agent for the Advertisement Department in France—J. ASTIER, 66, Rue Caumartin, Paris.